

Crude Petroleum and Natural Gas Extraction

1997

Issued December 1999

EC97N-2111A

1997 Economic Census

Mining

Industry Series



U S C E N S U S B U R E A U

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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
211111	Crude petroleum & natural gas extraction	6 802	7 781	100 308	4 968 722	58 289	116 712	2 717 588	74 372 239	21 908 191	75 162 580	21 117 850
131100	Crude petroleum & natural gas	N	7 781	100 308	4 968 722	58 289	116 712	2 717 588	74 372 239	21 908 191	75 162 580	21 117 850

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
211111, CRUDE PETROLEUM & NATURAL GAS EXTRACTION												
United States	-	7 781	710	100 308	4 968 722	58 289	116 712	2 717 588	74 372 239	21 908 191	75 162 580	21 117 850
California	2	215	39	4 866	285 512	2 938	5 914	162 199	5 277 385	2 646 341	7 084 489	839 237
Colorado	2	317	26	4 531	208 891	1 876	3 969	90 295	1 863 080	479 790	1 958 040	384 830
Kansas	-	470	30	3 396	113 388	2 401	4 578	75 325	1 744 992	277 224	1 826 852	195 364
Louisiana	-	473	94	15 324	857 593	9 190	19 233	499 823	16 955 438	5 103 303	16 595 359	5 463 382
Michigan	-	110	14	910	35 553	530	1 050	18 775	553 674	77 156	542 908	87 922
Mississippi	2	128	7	693	28 619	426	860	17 747	309 334	110 019	337 253	82 100
Montana	1	89	7	900	37 570	343	637	12 214	246 830	79 931	253 346	73 415
Nebraska	1	30	1	147	4 561	98	172	2 680	27 324	7 954	29 992	5 286
New Mexico	-	199	25	2 239	100 872	1 645	3 470	73 214	3 461 551	615 844	3 354 655	722 740
North Dakota	-	55	5	950	49 352	826	1 833	43 307	651 174	155 767	690 020	116 921
Ohio	2	241	12	1 763	61 452	1 064	2 175	31 129	385 016	78 725	387 184	76 557
Oklahoma	1	1 069	71	10 703	480 095	5 030	9 906	210 597	4 040 537	1 112 979	4 145 036	1 008 480
Tennessee	1	15	3	103	3 038	63	98	1 612	12 957	7 037	15 823	4 171
Texas	-	3 063	259	40 035	2 016 020	22 609	43 720	1 022 340	24 099 340	7 067 171	23 169 843	7 996 668
Utah	-	64	14	1 035	46 485	612	1 228	23 836	680 122	175 571	683 756	171 937
Wyoming	-	173	24	1 863	90 343	1 405	2 945	69 455	2 703 861	475 786	2 810 406	369 241
Offshore areas not associated with a state	-	20	8	1 643	86 940	1 208	2 587	64 519	3 931 942	1 365 794	3 292 525	2 005 211

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
211111, CRUDE PETROLEUM & NATURAL GAS EXTRACTION		211111, CRUDE PETROLEUM & NATURAL GAS EXTRACTION—Con.	
Companies ¹	6 802	Value of primary products shipments or services produced in all industries	\$1,000.. 74 458 845
All establishments	7 781	Value of primary products shipments or services produced in this industry	\$1,000.. 74 420 508
Establishments with 0 to 19 employees	7 071	Value of primary products shipments or services produced in other industries	\$1,000.. 38 337
Establishments with 20 to 99 employees	544	Value added by mining	\$1,000.. 74 372 239
Establishments with 100 employees or more	166	Total inventories, end of 1996	\$1,000.. 1 433 094
All employees for pay period including March 12	100 308	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 505 674
Annual payroll	\$1,000.. 4 968 722	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 927 420
Annual fringe benefits not included in payroll	\$1,000.. 1 152 955	Total inventories, end of 1997	\$1,000.. 1 490 605
Production, development, and exploration workers for pay period including March 12	number.. 58 289	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 483 521
Production, development, and exploration worker annual hours	1,000.. 116 712	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 1 007 084
Production, development, and exploration worker annual wages	\$1,000.. 2 717 588	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. —
Total cost of supplies	\$1,000.. 21 908 191	Capital expenditures (except land and mineral rights)	\$1,000.. 21 117 850
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 10 947 595	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 4 383 835
Cost of resales	\$1,000.. 150 168	Capital expenditures for mineral exploration and development	\$1,000.. 16 734 015
Cost of purchased fuels consumed	\$1,000.. 902 986	Capital expenditures for mineral land and rights	\$1,000.. —
Cost of purchased electricity	\$1,000.. 1 623 444	Deductions from depreciable/depletable assets during year	\$1,000.. —
Cost of contract work	\$1,000.. 8 283 998	Gross book value of depreciable/depletable assets at end of year	\$1,000.. —
Quantity of electricity purchased	1,000 kWh.. 29 577 576	Total depreciation/depletion charges during year	\$1,000.. —
Quantity of electricity generated less sold	1,000 kWh.. 3 325 432	Total rental payments during year	\$1,000.. 852 281
Cost of purchased communications services	\$1,000.. 74 277	Rental payments for buildings and other structures	\$1,000.. 216 395
Total value of shipments and receipts	\$1,000.. 75 162 580	Rental payments for machinery and equipment	\$1,000.. 635 837
Primary products value of shipments	\$1,000.. 74 420 508	Lease rents	\$1,000.. —
Secondary products value of shipments and receipts for services	\$1,000.. 588 916	Expensed mineral exploration, development, land, and rights	\$1,000.. 8 350 802
Value of resales	\$1,000.. 153 156		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
211111, CRUDE PETROLEUM & NATURAL GAS EXTRACTION												
All establishments	—	7 781	710	100 308	4 968 722	58 289	116 712	2 717 588	74 372 239	21 908 191	75 162 580	21 117 850
Establishments with 0 to 4 employees	2	5 249	—	9 283	282 177	6 341	11 751	167 524	5 641 194	1 551 776	5 810 925	1 382 045
Establishments with 5 to 9 employees	—	1 161	—	7 625	264 661	4 521	8 100	151 387	3 891 926	943 960	3 924 929	910 957
Establishments with 10 to 19 employees	—	661	—	8 945	377 719	5 179	9 391	200 547	4 872 637	1 209 076	4 843 634	1 238 079
Establishments with 20 to 49 employees	—	412	412	12 758	599 825	7 602	15 515	329 278	10 314 896	2 835 308	10 538 529	2 611 675
Establishments with 50 to 99 employees	—	132	132	9 315	477 997	5 741	12 316	266 829	8 818 858	2 244 665	8 646 336	2 417 187
Establishments with 100 to 249 employees	—	105	105	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	—	40	40	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees	1	14	14	D	D	D	D	D	D	D	D	D
Establishments with 1,000 to 2,499 employees	2	5	5	D	D	D	D	D	D	D	D	D
Establishments with 2,500 employees or more	—	2	2	D	D	D	D	D	D	D	D	D
Administrative records ²	9	4 168	—	9 435	236 848	6 338	12 093	140 090	1 588 219	517 621	1 691 913	413 927

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
211111, CRUDE PETROLEUM & NATURAL GAS EXTRACTION								
All establishments	7 781	710	100 308	4 968 722	58 289	116 712	2 717 588	74 372 239
Producing establishments	7 574	685	97 494	4 831 817	57 352	115 035	2 676 182	74 366 788
Mines or wells only	7 574	685	97 494	4 831 817	57 352	115 035	2 676 182	74 366 788
Underground mines	-	-	-	-	-	-	-	-
Open-pit mines	-	-	-	-	-	-	-	-
Combination mines, well operations, or other types of mines	7 574	685	97 494	4 831 817	57 352	115 035	2 676 182	74 366 788
Mines with preparation plants	-	-	-	-	-	-	-	-
Underground mines	-	-	-	-	-	-	-	-
Open-pit mines	-	-	-	-	-	-	-	-
Combination mines or other types of mines	-	-	-	-	-	-	-	-
Separately operated preparation plants	-	-	-	-	-	-	-	-
Undistributed ¹	-	-	-	-	-	-	-	-
Nonproducing establishments	207	25	2 814	136 905	937	1 677	41 406	5 451

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997		1992			
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
211111	Crude petroleum and natural gas	X	X	74 458 845	X	X	71 607 669
21111111	Crude petroleum, including lease condensate (volumes corrected to 60 degrees F) shipped	X	X	32 187 616	X	X	36 628 076
21111111	Crude petroleum, including lease condensate (volumes corrected to 60 degrees F) shipped	X	X	32 187 616	X	X	N
2111111111	Crude petroleum, including lease condensate (volumes corrected to 60 degrees F) shipped	X	1 804.0	32 187 616	X	2 510.3	36 628 076
2111111121	Crude petroleum shipped from stripper well leases	X	122.7	X	X	183.8	X
2111111131	Lease condensate produced (volumes corrected to 60 degrees F)	X	127.9	X	X	126.9	X
21111113	Natural gas	X	X	34 467 194	X	X	27 775 106
21111131	Natural gas	X	X	34 467 194	X	X	N
2111113100	Natural gas (volumes adjusted to pressure base of 14.73 lb absolute at 60 degrees F) shipped to consumers	X	14 575.8	34 467 194	X	16 005.1	27 775 106
211111W	Crude petroleum and natural gas, nsk	X	X	7 804 035	X	X	7 204 487
211111WY	Crude petroleum and natural gas, nsk	X	X	7 804 035	X	X	N
211111WYWT	Crude petroleum and natural gas, nsk #	X	X	7 804 035	X	X	7 204 487

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2111111	CRUDE PETROLEUM, INCLUDING LEASE CONDENSATE (VOLUMES CORRECTED TO 60 DEGREES F) SHIPPED		
	United States	32 187 616	36 628 076
	California	5 890 923	3 591 444
	Colorado	484 023	662 541
	Kansas	438 880	822 783
	Louisiana	5 791 421	5 523 213
	Michigan	150 941	245 367
	Mississippi	151 969	313 081
	Montana	147 580	259 297
	Nebraska	23 509	52 414
	New Mexico	993 810	956 274
	North Dakota	367 638	407 163
	Ohio	71 368	99 172
	Oklahoma	1 019 750	1 651 767
	Texas	7 978 607	10 325 242
	Utah	322 432	444 774
	Wyoming	932 775	1 298 951
Offshore areas	1 267 341	1 057 616	
2111113	NATURAL GAS		
	United States	34 467 194	27 775 106
	California	842 641	546 299
	Colorado	836 993	508 644
	Kansas	1 195 788	886 483
	Louisiana	9 402 251	6 782 771
	Michigan	355 622	604 711
	Mississippi	91 725	95 011
	Montana	61 683	48 679
	New Mexico	2 264 113	1 395 599
	North Dakota	196 491	218 119
	Ohio	221 600	223 160
	Oklahoma	2 224 863	2 533 631
	Texas	11 463 101	8 790 611
	Utah	274 110	149 979
	Wyoming	1 677 611	2 225 205
	Offshore areas	1 984 834	1 045 920

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
211111	CRUDE PETROLEUM & NATURAL GAS EXTRACTION				
	SUPPLIES CONSUMED BY TYPE				
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	3 827 911	X	3 448 660
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	689 244	X	243 643
32500075	Industrial chemicals, including acidizing materials (except drilling fluids)	X	1 121 165	X	468 055
32599803	Drilling fluids (drilling mud and drilling mud materials; mud thinners, thickeners, and purifiers)	X	663 994	X	313 419
32419100	Lubricating oils and greases, including hydraulic oils	X	68 007	X	43 724
32731001	Cement	X	371 700	X	225 259
33120059	Steel shapes and forms, except castings and forgings	X	1 368 649	X	1 050 205
33290013	Valves and pipe fittings	X	301 865	X	142 745
33300005	Drill bits and reamers	X	195 629	X	88 004
00999828	Water purchased	X	71 501	X	75 916
00970098	All other supplies	X	615 765	X	893 278
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	1 652 165	X	1 176 358
	FUELS CONSUMED BY TYPE				
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel	2 017.8	61 214	2 940.9	90 234
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel				
21111015	Gas (natural, manufactured, and mixed) used as a fuel	648.5	20 549	174.7	5 293
32411015	Gasoline used as a fuel	169.7	459 809	181.4	318 821
21111011	Crude petroleum produced and used in the same plant as a fuel	98.2	105 247	34.6	36 981
21111003	Natural gas produced and used in the same plant as a fuel	0.6	X	1.4	X
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	715.9	X	376.6	X
00974000	Undistributed fuels#	X	38 536	X	91 127
		X	217 631	X	153 642

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

211111 CRUDE PETROLEUM AND NATURAL GAS EXTRACTION

This U.S. industry comprises establishments primarily engaged in (1) the exploration, development and/or the production of petroleum or natural gas from wells in which the hydrocarbons will initially flow or can be produced using normal pumping techniques, or (2) the production of crude petroleum from surface shales or tar

sands or from reservoirs in which the hydrocarbons are semisolids. Establishments in this industry operate oil and gas wells on their own account or for others on a contract or fee basis.

The data published with NAICS code 211111 include the following SIC industry:

1311 Crude petroleum and natural gas

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 211111WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2111111.....	13111	13111	2111111W	13110	13110	2111121461	1321234	1321234
211111111	1311100	1311100	2111111WYWT.....	1311000	1311000	2111121491	1321298	1321298
2111111121	1311104	1311104				2111121YWV	13212XX.....	13212XX
2111111131	1311107	1311107	2111121	13212	13212			
2111111YWV	13111XX.....	13111XX	2111121111	1321220	1321220	2111123	13213	13213
			2111121221	1321231	1321231	2111123100	1321300	1321300
			2111121331	1321232	1321232			
2111113.....	13115	13115	2111121441	1321210	1321210	211112W	13210	13210
2111113100	1311500	1311500	2111121451	1321215	1321215	211112WYWT.....	1321000	1321000

Natural Gas Liquid Extraction

1997

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1997 Economic Census

Mining

Industry Series



U S C E N S U S B U R E A U

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U.S. Department of Commerce
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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
211112	Natural gas liquid extraction	89	529	10 549	541 593	8 870	18 807	456 083	5 147 454	20 359 528	24 828 503	678 479
132100	Natural gas liquids	N	529	10 549	541 593	8 870	18 807	456 083	5 147 454	20 359 528	24 828 503	678 479

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
211112, NATURAL GAS LIQUID EXTRACTION												
United States	-	529	163	10 549	541 593	8 870	18 807	456 083	5 147 454	20 359 528	24 828 503	678 479
California	-	25	9	812	39 947	656	1 440	31 570	120 537	630 292	728 199	22 630
Colorado	-	15	7	287	16 346	236	477	13 387	90 329	374 632	451 695	13 266
Kansas	-	13	4	185	9 971	128	269	7 189	125 628	872 702	990 594	7 736
Louisiana	-	98	21	1 838	104 916	1 636	3 535	92 835	938 663	4 784 680	5 615 182	108 161
Michigan	-	5	1	138	8 291	96	204	5 496	52 235	85 069	134 485	2 819
New Mexico	-	35	16	1 031	52 483	933	1 937	47 709	318 229	1 605 821	1 830 956	93 094
Oklahoma	-	56	13	961	44 877	750	1 600	36 597	320 763	1 325 027	1 615 753	30 037
Texas	-	211	66	3 993	203 072	3 273	7 041	166 160	2 838 623	8 877 540	11 411 439	304 724
Wyoming	-	37	15	791	37 594	735	1 469	34 884	129 780	1 138 219	1 210 597	57 402

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
211112, NATURAL GAS LIQUID EXTRACTION		211112, NATURAL GAS LIQUID EXTRACTION— Con.	
Companies ¹	number.. 89	Value of primary products shipments or services produced in all industries	\$1,000.. 25 147 178
All establishments	number.. 529	Value of primary products shipments or services produced in this industry	\$1,000.. 24 737 733
Establishments with 0 to 19 employees	number.. 366	Value of primary products shipments or services produced in other industries	\$1,000.. 409 445
Establishments with 20 to 99 employees	number.. 156	Value added by mining	\$1,000.. 5 147 454
Establishments with 100 employees or more	number.. 7	Total inventories, end of 1996	\$1,000.. 75 745
All employees for pay period including March 12	number.. 10 549	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 49 979
Annual payroll	\$1,000.. 541 593	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 25 766
Annual fringe benefits not included in payroll	\$1,000.. 157 940	Total inventories, end of 1997	\$1,000.. 71 976
Production, development, and exploration workers for pay period including March 12	number.. 8 870	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 42 426
Production, development, and exploration worker annual hours	1,000.. 18 807	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 29 550
Production, development, and exploration worker annual wages	\$1,000.. 456 083	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 9 511 195
Total cost of supplies	\$1,000.. 20 359 528	Capital expenditures (except land and mineral rights)	\$1,000.. 678 479
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 19 826 694	and equipment (new and used)	\$1,000.. 678 479
Cost of resales	\$1,000.. —	Capital expenditures for mineral exploration and development	\$1,000.. —
Cost of purchased fuels consumed	\$1,000.. 164 859	Capital expenditures for mineral land and rights	\$1,000.. —
Cost of purchased electricity	\$1,000.. 156 641	Deductions from depreciable/depletable assets during year	\$1,000.. 159 310
Cost of contract work	\$1,000.. 211 334	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 10 030 364
Quantity of electricity purchased	1,000 kWh.. 3 220 910	Total depreciation/depletion charges during year	\$1,000.. 583 808
Quantity of electricity generated less sold	1,000 kWh.. 1 007 651	Total rental payments during year	\$1,000.. 32 780
Cost of purchased communications services	\$1,000.. 5 181	Rental payments for buildings and other structures	\$1,000.. 12 097
Total value of shipments and receipts	\$1,000.. 24 828 503	Rental payments for machinery and equipment	\$1,000.. 20 683
Primary products value of shipments	\$1,000.. 24 737 733	Lease rents	\$1,000.. —
Secondary products value of shipments and receipts for services	\$1,000.. 90 770	Expensed mineral exploration, development, land, and rights	\$1,000.. —
Value of resales	\$1,000.. —		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
211112, NATURAL GAS LIQUID EXTRACTION												
All establishments	—	529	163	10 549	541 593	8 870	18 807	456 083	5 147 454	20 359 528	24 828 503	678 479
Establishments with 0 to 4 employees	—	143	—	293	14 445	249	514	12 788	237 346	1 237 407	1 407 192	67 561
Establishments with 5 to 9 employees	—	101	—	677	31 935	580	1 272	27 661	272 543	1 398 062	1 611 156	59 449
Establishments with 10 to 19 employees	—	122	—	1 712	84 599	1 416	3 090	71 194	818 464	4 311 255	4 982 941	146 778
Establishments with 20 to 49 employees	—	121	121	3 841	193 631	3 305	7 084	165 377	1 310 266	6 729 204	7 828 439	211 031
Establishments with 50 to 99 employees	—	35	35	2 210	112 209	1 933	3 937	100 653	1 106 872	4 428 559	5 430 448	104 983
Establishments with 100 to 249 employees	—	3	3	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	—	3	3	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	5	—	9	92	6	8	82	523	1 863	2 300	86

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
211112, NATURAL GAS LIQUID EXTRACTION								
All establishments	529	163	10 549	541 593	8 870	18 807	456 083	5 147 454
Producing establishments	511	160	10 407	534 876	8 766	18 564	451 239	5 143 798
Mines or wells only	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines or other types of mines	—	—	—	—	—	—	—	—
Separately operated preparation plants	511	160	10 407	534 876	8 766	18 564	451 239	5 143 798
Undistributed ¹	—	—	—	—	—	—	—	—
Nonproducing establishments	18	3	142	6 717	104	243	4 844	3 656

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
211112	Natural gas liquids	X	X	25 147 178	X	X	27 401 025
2111121	Natural gas liquids	X	X	9 184 192	X	X	9 411 056
21111211	Isopentane and natural gasoline	X	X	1 244 221	X	X	N
2111121111	Isopentane and natural gasoline .. mil bbl..	68.6	68.5	1 244 221	89.9	90.1	1 580 341
21111212	Propane	X	X	2 458 416	X	X	N
2111121221	Propane .. mil bbl..	166.5	166.1	2 458 416	195.5	195.1	2 470 230
21111213	Butane	X	X	1 893 250	X	X	N
2111121331	Butane .. mil bbl..	101.4	101.2	1 893 250	144.4	144.4	2 157 337
21111214	Plant condensate, ethane, gas mixtures, and other natural gas liquids	X	X	3 588 305	X	X	N
2111121441	Plant condensate from natural gas liquids plants .. mil bbl..	14.4	14.6	259 687	10.7	10.7	177 395
2111121451	Ethane .. mil bbl..	198.9	198.7	1 738 885	193.6	192.1	1 662 572
2111121461	Gas mixtures from natural gas liquids plants .. mil bbl..	27.0	26.8	423 481	17.1	17.4	225 807
2111121491	Other natural gas liquids .. mil bbl..	87.1	86.9	1 166 252	98.9	98.5	1 137 374
2111123	Residue gas shipped from natural gas liquids plants	X	X	15 810 792	X	X	17 803 960
21111231	Residue gas shipped from natural gas liquids plants	X	X	15 810 792	X	X	N
2111123100	Residue gas shipped from natural gas liquids plants .. bil cu ft..	X	6 595.1	15 810 792	X	10 339.6	17 803 960
211112W	Natural gas liquids, nsk	X	X	152 194	X	X	186 009
211112WY	Natural gas liquids, nsk	X	X	152 194	X	X	N
211112WYWT	Natural gas liquids, nsk #	X	X	152 194	X	X	186 009

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2111121	NATURAL GAS LIQUIDS		
	United States	9 184 192	9 411 056
	California	172 066	106 905
	Colorado	122 530	104 394
	Kansas	188 123	665 624
	Louisiana	716 713	1 245 878
	New Mexico	737 510	565 506
	Oklahoma	617 000	654 668
	Texas	5 828 649	5 398 485
	Wyoming	433 797	292 861
2111123	RESIDUE GAS SHIPPED FROM NATURAL GAS LIQUIDS PLANTS		
	United States	15 810 792	17 803 960
	California	551 967	188 536
	Colorado	329 651	525 407
	Kansas	763 826	1 380 142
	Louisiana	4 942 914	5 895 954
	New Mexico	1 080 746	918 535
	Oklahoma	997 126	1 056 602
	Texas	5 579 480	5 468 782
	Wyoming	837 426	1 598 261

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
211112	NATURAL GAS LIQUID EXTRACTION				
	SUPPLIES CONSUMED BY TYPE				
21111105	Crude petroleum, including condensate, received for processing	4.0	69 109	1.2	21 705
21111011	Natural gas processed	7 239.5	16 113 360	11 627.5	19 366 901
21111201	Natural gas liquids received for further processing				
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	227.4	2 994 116	232.2	2 915 256
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	318 943	X	413 026
33120059	Steel shapes and forms, except castings and forgings	X	42 411	X	58 159
32510093	Industrial organic chemicals, including ethylene glycol and fluorinated hydrocarbon gases	X	31 181	X	36 232
32419100	Lubricating oils and greases, including hydraulic oils	X	53 731	X	51 645
00970098	All other supplies	X	18 475	X	19 889
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	53 994	X	123 301
	FUELS CONSUMED BY TYPE				
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel	47.7	1 353	D	D
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel				
21111015	Gas (natural, manufactured, and mixed) used as a fuel	47.1	1 201	D	D
32411015	Gasoline used as a fuel	60.5	137 784	80.3	134 162
21111029	Residue gas produced and used at the same plant as a fuel	1.9	2 244	0.6	618
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	123.9	X	240.4	X
00974000	Undistributed fuels#	X	D	X	5 332
			D	X	7 927

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class. . . .	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

211112 NATURAL GAS LIQUID EXTRACTION

This U.S. industry comprises establishments primarily engaged in the recovery of liquid hydrocarbons from oil and gas field gases. Establishments primarily engaged in sulfur recovery from natural gas are included in this industry.

The data published with NAICS code 211112 include the following SIC industry:

1321 Natural gas liquids

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Mining did not fully implement the conversion to NAICS. Data for NAICS industry 211112 do not include establishments primarily engaged in sulfur recovery from natural gas. The NAICS definitions will be fully implemented with the 2002 Economic Census.

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 211112WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2111111.....	13111	13111	211111W	13110	13110	2111121461	1321234	1321234
211111111	1311100	1311100	211111WYWT.....	1311000	1311000	2111121491	1321298	1321298
2111111121	1311104	1311104	2111121	13212	13212	2111121YWV	13212XX.....	13212XX
2111111131	1311107	1311107	2111121111	1321220	1321220	2111123	13213	13213
2111111YWV	13111XX.....	13111XX	2111121221	1321231	1321231	2111123100	1321300	1321300
2111113.....	13115	13115	2111121331	1321232	1321232	211112W	13210	13210
2111113100	1311500	1311500	2111121441	1321210	1321210	211112WYWT.....	1321000	1321000
			2111121451	1321215	1321215			

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Com-panies ¹	All estab-lish-ments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212111	Bituminous coal & lignite surface mining	611	834	36 502	1 647 433	30 339	64 682	1 322 818	7 245 921	5 936 378	12 416 008	766 291
122100	Bituminous coal & lignite - surface	N	834	36 502	1 647 433	30 339	64 682	1 322 818	7 245 921	5 936 378	12 416 008	766 291

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)	
	E ¹	Total	With 20 em-ploy-ees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)					Annual wages (\$1,000)
212111, BITUMINOUS COAL & LIGNITE SURFACE MINING												
United States	-	834	372	36 502	1 647 433	30 339	64 682	1 322 818	7 245 921	5 936 378	12 416 008	766 291
Alabama	3	46	20	1 573	61 157	1 329	2 690	51 825	235 636	132 388	348 675	19 349
Colorado	-	6	4	607	32 715	506	1 090	25 988	96 612	54 671	140 434	10 849
Illinois	1	18	10	963	48 510	772	1 536	36 307	125 930	255 219	368 292	12 857
Indiana	-	31	21	1 805	95 493	1 678	3 901	87 128	319 301	192 192	460 704	50 789
Kentucky	-	170	88	6 366	235 872	5 551	11 953	203 863	1 083 123	1 364 533	2 321 325	126 331
Montana	-	8	5	860	40 864	670	1 386	30 356	361 505	112 437	460 909	13 033
North Dakota	-	9	4	992	55 888	795	1 498	43 740	193 908	61 345	235 913	19 340
Ohio	1	65	25	1 711	67 234	1 356	2 857	52 160	269 597	157 350	390 655	36 292
Pennsylvania	1	178	41	3 392	107 302	2 843	5 696	89 764	415 211	595 417	949 068	61 560
Texas	-	10	9	2 600	139 710	1 713	3 442	85 785	378 948	253 315	621 298	10 965
Virginia	-	61	33	1 830	71 614	1 619	3 166	63 955	278 120	482 622	724 310	36 432
West Virginia	-	150	65	5 750	263 456	4 988	10 839	224 932	1 200 507	1 407 789	2 462 577	145 719

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212111, BITUMINOUS COAL & LIGNITE SURFACE MINING		212111, BITUMINOUS COAL & LIGNITE SURFACE MINING—Con.	
Companies ¹	611	Value of primary products shipments or services produced in all industries	\$1,000.. 12 303 340
All establishments	834	Value of primary products shipments or services produced in this industry	\$1,000.. 12 302 012
Establishments with 0 to 19 employees	462	Value of primary products shipments or services produced in other industries	\$1,000.. 1 328
Establishments with 20 to 99 employees	275	Value added by mining	\$1,000.. 7 245 921
Establishments with 100 employees or more	97	Total inventories, end of 1996	\$1,000.. 704 242
All employees for pay period including March 12	36 502	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 316 848
Annual payroll	\$1,000.. 1 647 433	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 387 394
Annual fringe benefits not included in payroll	\$1,000.. 483 257	Total inventories, end of 1997	\$1,000.. 709 285
Production, development, and exploration workers for pay period including March 12	number.. 30 339	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 333 571
Production, development, and exploration worker annual hours	1,000.. 64 682	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 375 714
Production, development, and exploration worker annual wages	\$1,000.. 1 322 818	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 11 328 070
Total cost of supplies	\$1,000.. 5 936 378	Capital expenditures (except land and mineral rights)	\$1,000.. 766 291
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 4 708 733	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 700 711
Cost of resales	\$1,000.. 58 970	Capital expenditures for mineral exploration and development	\$1,000.. 65 580
Cost of purchased fuels consumed	\$1,000.. 362 015	Capital expenditures for mineral land and rights	\$1,000.. 40 133
Cost of purchased electricity	\$1,000.. 182 069	Deductions from depreciable/depletable assets during year	\$1,000.. 378 991
Cost of contract work	\$1,000.. 624 591	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 11 755 503
Quantity of electricity purchased	1,000 kWh.. 4 203 677	Total depreciation/depletion charges during year	\$1,000.. 745 993
Quantity of electricity generated less sold	1,000 kWh.. D	Total rental payments during year	\$1,000.. 251 780
Cost of purchased communications services	\$1,000.. 8 082	Rental payments for buildings and other structures	\$1,000.. 11 509
Total value of shipments and receipts	\$1,000.. 12 416 008	Rental payments for machinery and equipment	\$1,000.. 240 271
Primary products value of shipments	\$1,000.. 12 302 012	Lease rents	\$1,000.. 59 890
Secondary products value of shipments and receipts for services	\$1,000.. 20 199	Expensed mineral exploration, development, land, and rights	\$1,000.. 436 442
Value of resales	\$1,000.. 93 797		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212111, BITUMINOUS COAL & LIGNITE SURFACE MINING												
All establishments	-	834	372	36 502	1 647 433	30 339	64 682	1 322 818	7 245 921	5 936 378	12 416 008	766 291
Establishments with 0 to 4 employees	2	205	-	519	11 395	327	470	8 083	32 429	95 600	122 328	5 701
Establishments with 5 to 9 employees	2	112	-	764	23 382	602	948	17 451	91 457	211 176	292 769	9 864
Establishments with 10 to 19 employees	1	145	-	2 038	66 435	1 662	3 051	54 778	282 898	392 419	642 332	32 985
Establishments with 20 to 49 employees	-	185	185	5 838	221 603	5 052	10 436	186 424	922 814	1 738 683	2 515 259	146 238
Establishments with 50 to 99 employees	-	90	90	6 358	256 359	5 554	11 788	221 772	1 134 549	1 424 828	2 421 462	137 915
Establishments with 100 to 249 employees	-	68	68	10 582	515 768	8 936	20 266	419 563	2 101 608	1 095 450	2 939 320	257 738
Establishments with 250 to 499 employees	-	25	25	8 146	423 389	6 777	14 692	337 476	2 273 856	D	2 907 501	D
Establishments with 500 to 999 employees	-	4	4	2 257	129 102	1 429	3 031	77 271	406 310	D	575 037	D
Establishments with 1,000 to 2,499 employees	-	-	-	-	-	-	-	-	-	-	-	-
Establishments with 2,500 employees or more	-	-	-	-	-	-	-	-	-	-	-	-
Administrative records ²	9	234	-	1 488	35 924	1 191	1 783	30 814	104 970	55 930	150 377	10 523

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212111, BITUMINOUS COAL & LIGNITE SURFACE MINING								
All establishments	834	372	36 502	1 647 433	30 339	64 682	1 322 818	7 245 921
Producing establishments	779	366	36 108	1 632 564	30 093	64 299	1 314 514	7 260 470
Mines or wells only	504	157	12 574	469 737	10 787	21 124	404 710	1 531 324
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	485	144	12 016	447 081	10 306	20 105	385 528	1 424 799
Combination mines, well operations, or other types of mines	19	13	558	22 656	481	1 019	19 182	106 525
Mines with preparation plants	203	162	21 231	1 056 612	17 382	39 103	823 522	5 043 123
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	171	138	18 507	931 180	15 033	33 679	719 272	4 519 766
Combination mines or other types of mines	32	24	2 724	125 432	2 349	5 424	104 250	523 357
Separately operated preparation plants	72	47	2 303	106 215	1 924	4 072	86 282	686 023
Undistributed ¹	—	—	—	—	—	—	—	—
Nonproducing establishments	55	6	394	14 869	246	383	8 304	S

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212111	Bituminous coal and lignite from surface operations #	X	X	12 303 340	X	X	13 689 516
2121111	Run-of-mine (raw) bituminous coal and lignite shipped from surface mining operations	X	X	1 609 146	X	X	1 816 557
21211111	Run-of-mine (raw) bituminous coal and lignite shipped from surface mining operations, for use without processing	X	X	502 260	X	X	N
212111111	Run-of-mine (raw) bituminous coal and lignite shipped from surface mining operations, for use without processing	X	23.5	502 260	X	34.9	644 532
21211112	Run-of-mine (raw) bituminous coal and lignite shipped from surface mining operations, for processing at other establishments #	X	X	1 106 886	X	X	N
2121111221	Run-of-mine (raw) bituminous coal and lignite shipped from surface mining operations, for processing at other establishments	X	68.0	1 106 886	X	67.2	1 172 025
21211113	Processed bituminous coal and lignite shipped from surface operations	X	X	10 217 943	X	X	10 831 794
21211131	Processed bituminous coal and lignite shipped from surface operations, washed by wet-washing, pneumatic, or other methods	X	X	4 811 211	X	X	N
2121113111	Processed bituminous coal and lignite shipped from surface operations, washed by wet-washing, pneumatic, or other methods	X	182.2	4 811 211	X	187.3	5 350 202
21211132	Processed bituminous coal shipped from surface operations (mechanically crushed, screened, or sized only)	X	X	2 671 517	X	X	N
2121113221	Processed bituminous coal shipped from surface operations (mechanically crushed, screened, or sized only)	X	113.9	2 671 517	X	102.9	2 601 346
21211133	Processed subbituminous coal shipped from surface operations (mechanically crushed, screened, or sized only)	X	X	1 888 198	X	X	N
2121113331	Processed subbituminous coal shipped from surface operations (mechanically crushed, screened, or sized only)	X	308.1	1 888 198	X	232.9	2 083 221
21211134	Processed lignite coal shipped from surface operations (mechanically crushed, screened, or sized only)	X	X	847 017	X	X	N
2121113441	Processed lignite coal shipped from surface operations (mechanically crushed, screened, or sized only)	X	80.9	847 017	X	73.7	797 025
212111W	Bituminous coal and lignite surface mining, nsk	X	X	476 251	X	X	1 041 165
212111WY	Bituminous coal and lignite surface mining, nsk	X	X	476 251	X	X	N
212111WYWT	Bituminous coal and lignite surface mining, nsk #	X	X	476 251	X	X	1 041 165

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2121111	RUN-OF-MINE (RAW) BITUMINOUS COAL AND LIGNITE SHIPPED FROM SURFACE MINING OPERATIONS		
	United States	1 609 146	1 816 557
	Alabama	22 981	44 794
	Colorado	73 109	40 412
	Illinois	8 841	64 638
	Kentucky	330 137	567 168
	Ohio	55 344	77 045
	Pennsylvania	161 514	140 665
	Tennessee	9 685	10 560
	Virginia	164 978	166 752
	West Virginia	561 378	440 409
2121113	PROCESSED BITUMINOUS COAL AND LIGNITE SHIPPED FROM SURFACE OPERATIONS		
	United States	10 217 943	10 831 794
	Alabama	223 177	342 599
	Illinois	305 464	706 221
	Indiana	308 929	607 671
	Kentucky	1 918 713	1 853 927
	Montana	402 748	414 078
	North Dakota	235 898	215 593
	Ohio	288 258	357 607
	Pennsylvania	708 729	731 123
	Tennessee	58 573	33 895
	Texas	582 300	530 407
	Virginia	522 965	786 581
	West Virginia	1 802 093	1 578 168
Wyoming	1 672 771	1 467 503	

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212111	BITUMINOUS COAL & LIGNITE SURFACE MINING				
	SUPPLIES CONSUMED BY TYPE				
21211005	Run-of-mine (raw) coal received for washing using wet-washing, pneumatic, or other methods mil s tons..	181.6	2 384 154	159.6	2 446 128
21211007	Run-of-mine (raw) coal mined and processed at same establishment by washing (wet-washing, pneumatic, or other methods) mil s tons..	98.2	X	130.5	X
21211009	Run-of-mine (raw) coal received for processing by other methods; such as mechanical crushing, screening, or sizing mil s tons..	9.8	184 043	18.6	354 043
21211011	Run-of-mine (raw) coal mined and processed at same establishment by other methods-mechanically crushing/screening/sizing mil s tons..	490.6	X	395.4	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	486 913	X	659 850
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	549 373	X	486 861
31320029	Filter and brattice cloth	X	3 271	X	2 742
11300000	Round or hewn wood products and stumpage	X	1 070	X	2 790
32592003	Explosive materials, except ammonium nitrate	X	88 255	X	87 641
32592005	Ammonium nitrate	X	164 934	X	170 652
32592007	Blasting accessories	X	43 460	X	34 872
32419100	Lubricating oils and greases, including hydraulic oils	X	42 665	X	53 185
32621001	Tires and inner tubes	X	70 231	X	61 853
32600009	Rubber and plastics products (hose, conveyor belting, etc.) except tires, tubes, and gaskets	X	7 486	X	13 455
32700037	Concrete products	X	1 782	X	2 944
32799217	Nonmetallic mineral products (rock dust, other prepared nonmetallic minerals and earths, etc.)	X	5 871	X	5 671
33120049	Steel shapes and forms, except castings, forgings, and wire products	X	13 273	X	17 101
33100085	Nonferrous metal wire including trolley wire	X	1 049	X	1 357
33272200	Roof bolts	X	1 940	X	2 168
33290007	Wire rope, cable, springs, and other fabricated wire products, excluding wire	X	22 681	X	24 702
33300005	Drill bits and reamers	X	11 458	X	25 658
00970098	All other supplies	X	351 246	X	416 330
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	273 578	X	331 935
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel1,000 s tons..	D	D	60.3	1 724
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	7 420.4	219 512	8 045.0	229 685
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel1,000 barrels..	721.2	20 461	975.4	30 039
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	0.7	2 011	0.3	713
32411015	Gasoline used as a fuel mil gal..	29.4	24 033	18.6	17 358
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	D	X	1 668
00974000	Undistributed fuels#	X	89 113	X	111 926
21211013	Coal (bituminous, subbituminous, lignite, and anthracite) produced and used in the same plant as a fuel1,000 s tons..	31.5	X	D	X

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class.	2111111	Crude petroleum, including lease condensate
BLS link code	211111X	
Product code	211111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212111 BITUMINOUS COAL AND LIGNITE SURFACE MINING

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) surface mining or development of bituminous coal and lignite; (2) developing bituminous coal and lignite surface mine sites;

and (3) beneficiating bituminous coal (e.g., cleaning, washing, screening, and sizing coal) whether mined on surface or underground.

The data published with NAICS code 212111 include the following SIC industry:

1221 Bituminous coal and lignite surface mining

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 212111	Value of net shipments for 1997 is 9,258,892 thousand dollars. In 1992 it was 9,848,180 thousand dollars. Net shipments represent gross shipments excluding coal not specified by kind and less coal recieved for preparation.
# 21211112	Includes estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).
# 212111WYWT	Represents value for establishments that did not report detailed data.

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14551
2121113111	1221201	1221201	2122343	10212	10212	2123240 pt.	14552 pt	14552
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455100 pt
2121113331	1221218	1221218	2122345	10213	10213	2123240111 pt	1455211 pt	1455201
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455100 pt
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240121 pt	1455212 pt	1455202
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123240YWT	1455000	1455000
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251	14591	14591
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123251100	1459100	1459100
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253	14592	14592
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459211
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123253100 pt	1459200 pt	1459221
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255	14593	14593
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123221	1222217	1222217	2122911	10941	10941	2123257	14596	14596
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123257100	1459600	1459600
212112W	12220	12220	2122913	10942	10942	2123258	14597	14597
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258111	1459711	1459711
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258121	1459721	1459721
2121131111	1231101	1231101	2122913121	1094205	1094205	2123258YVW	14597XX	14597XX
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259	14599	14599
2121131YVW	12311XX	12311XX	212291W	10940	10940	2123259100	1459900	1459900
2121133	12312	12312	212291WYWT	1094000	1094000	212325W	14590	14590
2121133111	1231201	1231201	2122991	10992	10992	212325WYWT	1459000	1459000
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14741
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14742
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911 pt.	14745 pt	14744
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474100
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474200
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123911100 pt	1474500 pt	1474400
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913	14743	14743
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913111	1474301	1474301
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913121	1474303	1474303
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	2123913YVW	14743XX	14743XX
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391W	14740	14740
2122103131	1011207	1011207	212299W pt.	10990 pt	10997 pt	212391WYWT	1474000	1474000
2122103YVW	10112XX	10112XX	212299WYWT pt	1099000 pt	1099700	2123921	14751	14751
212210W	10110	10110	212310	14110	14110	2123921100 pt	1475100 pt	1475101
212210WYWT	1011000	1011000	2123101011	1411011	1411011	2123921100 pt	1475100 pt	1475103
2122211	10411	10411	2123101021	1411015	1411015	2123923	14752	14752
2122211111	1041104	1041104	2123101031	1411019	1411019	2123923111 pt	1475202 pt	1475201
2122211121	1041121	1041121	21231010YWT	1411000	1411000	2123923111 pt	1475202 pt	1475203
2122211131	1041123	1041123	2123120	14220	14220	2123923111 pt	1475202 pt	1475205
2122211YVW	10411XX	10411XX	2123120100	1422000	1422000	2123923131	1475207	1475207
2122213	10412	10412	2123120YWT	14220XX	14220XX	2123923YVW	14752XX	14752XX
2122213100	1041200	1041200	2123130	14230	14230	212392W	14750	14750
2122215	10413	10413	2123130100	1423000	1423000	212392WYWT	1475000	1475000
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931	14791	14791
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123931100	1479100	1479100
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933	14793	14793
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123933100	1479300	1479300
212221WYWT	1041000	1041000	2123190 pt.	1499A pt	14992 pt	2123935100	1479400	1479400
2122221	10441	10441	2123190111	1499A22	1499200 pt	2123939	14798	14798
2122221111	1044104	1044104	2123190121	1429000	1429000	2123939100	1479800	1479800
2122221121	1044121	1044121	2123190YWT pt	14290XX	14290XX	212393W	14790	14790
2122221131	1044123	1044123	2123190YWT pt	1499000 pt	1499000 pt	212393WYWT	1479000	1479000
2122221YVW	10441XX	10441XX	2123211	14421	14421	2123991	14996	14996
2122223	10442	10442	2123211111	1442101	1442101	2123991100	1499600	1499600
2122223100	1044200	1044200	2123211121	1442105	1442105	2123993	14997	14997
2122225	10443	10443	2123211YVW	14421XX	14421XX	2123993100 pt	1499701 pt	1499712
2122225111	1044303	1044303	2123213	14422	14422	2123993100 pt	1499701 pt	1499722
2122225121	1044307	1044307	2123213111	1442201	1442201	2123995	14998	14998
2122225YVW	10443XX	10443XX	2123213221	1442205	1442205	2123995100 pt	1499801 pt	1499812
212222W	10440	10440	2123213YVW	14422XX	14422XX	2123999 pt.	1499A pt	14992 pt
212222WYWT	1044000	1044000	212321W	14420	14420	2123999 pt.	1499A pt	14993
2122231	10311	10311	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14994
2122231111	1031104	1031104	2123221	14461	14461	2123999 pt.	1499A pt	14995
21222311121	1031121	1031121	2123221100	1446100	1446100	2123223	14465	14465
21222311131	1031123	1031123	2123223	14465	14465	2123223100	1446500	1446500
2122231YVW	10311XX	10311XX	2123223100	1446500	1446500	2123229	14469	14469
21222313	10312	10312	2123229	14469	14469	2123229100	1446900	1446900
21222313111	1031201	1031201	2123231	14461	14461			
21222313121	1031221	1031221	2123231111	1446100	1446100			
21222313YVW	10312XX	10312XX	2123231311	1446100	1446100			
212231W	10310	10310	2123231321	1446100	1446100			
212231WYWT	1031000	1031000	2123231YVW	1446100	1446100			

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Bituminous Coal Underground Mining

1997

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Com-panies ¹	All estab-lish-ments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212112	Bituminous coal underground mining	462	614	50 197	2 295 060	44 130	91 621	1 955 751	8 183 253	3 823 735	10 783 368	1 223 620
122200	Bituminous coal - underground	N	614	50 197	2 295 060	44 130	91 621	1 955 751	8 183 253	3 823 735	10 783 368	1 223 620

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
		Total	With 20 em-ploy-ees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212112, BITUMINOUS COAL UNDERGROUND MINING												
United States	-	614	375	50 197	2 295 060	44 130	91 621	1 955 751	8 183 253	3 823 735	10 783 368	1 223 620
Alabama	-	12	10	3 790	193 041	3 150	6 615	153 650	634 263	148 787	728 427	54 623
Colorado	-	9	5	844	50 914	670	1 419	40 069	201 265	79 649	235 468	45 446
Illinois	-	18	14	3 950	185 934	3 459	6 784	156 499	544 554	230 879	723 510	51 923
Indiana	-	7	5	1 106	41 054	1 044	2 339	38 981	137 673	55 172	180 934	11 911
Kentucky	-	183	107	11 152	449 638	10 087	20 936	401 634	1 671 823	845 366	2 308 237	208 952
Ohio	-	7	7	1 889	103 290	1 472	3 085	74 209	306 602	175 684	434 551	47 735
Pennsylvania	-	43	28	5 451	281 109	4 769	10 540	239 994	1 027 847	426 318	1 301 120	153 045
Utah	-	18	16	2 610	125 238	2 243	4 208	104 128	596 783	208 599	610 301	195 081
Virginia	1	146	74	5 867	225 442	5 104	9 814	188 586	677 218	408 775	1 018 383	67 610
West Virginia	-	152	99	12 581	600 211	11 248	23 979	522 868	2 256 949	1 187 434	3 066 315	378 068

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212112, BITUMINOUS COAL UNDERGROUND MINING		212112, BITUMINOUS COAL UNDERGROUND MINING—Con.	
Companies ¹	462	Value of primary products shipments or services produced in all industries	\$1,000.. 10 703 830
All establishments	614	Value of primary products shipments or services produced in this industry	\$1,000.. 10 695 550
Establishments with 0 to 19 employees	239	Value of primary products shipments or services produced in other industries	\$1,000.. 8 280
Establishments with 20 to 99 employees	242	Value added by mining	\$1,000.. 8 183 253
Establishments with 100 employees or more	133	Total inventories, end of 1996	\$1,000.. 531 318
All employees for pay period including March 12	50 197	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 294 298
Annual payroll	\$1,000.. 2 295 060	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 237 020
Annual fringe benefits not included in payroll	\$1,000.. 928 368	Total inventories, end of 1997	\$1,000.. 561 763
Production, development, and exploration workers for pay period including March 12	number.. 44 130	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 341 297
Production, development, and exploration worker annual hours	1,000.. 91 621	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 220 466
Production, development, and exploration worker annual wages	\$1,000.. 1 955 751	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 10 440 028
Total cost of supplies	\$1,000.. 3 823 735	Capital expenditures (except land and mineral rights)	\$1,000.. 1 223 620
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 2 759 063	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 1 027 660
Cost of resales	\$1,000.. 63 789	Capital expenditures for mineral exploration and development	\$1,000.. 195 960
Cost of purchased fuels consumed	\$1,000.. 46 329	Capital expenditures for mineral land and rights	\$1,000.. 29 509
Cost of purchased electricity	\$1,000.. 299 357	Deductions from depreciable/depletable assets during year	\$1,000.. 459 288
Cost of contract work	\$1,000.. 655 197	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 11 233 869
Quantity of electricity purchased	1,000 kWh.. 7 061 319	Total depreciation/depletion charges during year	\$1,000.. 841 652
Quantity of electricity generated less sold	1,000 kWh.. D	Total rental payments during year	\$1,000.. 167 256
Cost of purchased communications services	\$1,000.. 6 669	Rental payments for buildings and other structures	\$1,000.. 12 734
Total value of shipments and receipts	\$1,000.. 10 783 368	Rental payments for machinery and equipment	\$1,000.. 154 522
Primary products value of shipments	\$1,000.. 10 695 550	Lease rents	\$1,000.. 166 245
Secondary products value of shipments and receipts for services	\$1,000.. 9 157	Expensed mineral exploration, development, land, and rights	\$1,000.. 422 066
Value of resales	\$1,000.. 78 661		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212112, BITUMINOUS COAL UNDERGROUND MINING												
All establishments	-	614	375	50 197	2 295 060	44 130	91 621	1 955 751	8 183 253	3 823 735	10 783 368	1 223 620
Establishments with 0 to 4 employees	2	78	-	204	5 236	132	214	4 143	34 679	33 691	65 600	2 770
Establishments with 5 to 9 employees	5	62	-	458	15 774	376	643	12 569	45 065	35 987	76 356	4 696
Establishments with 10 to 19 employees	4	99	-	1 399	45 884	1 271	2 137	39 912	132 895	87 707	205 184	15 418
Establishments with 20 to 49 employees	2	163	163	5 150	182 513	4 715	8 848	164 272	626 108	375 814	945 285	56 637
Establishments with 50 to 99 employees	1	79	79	5 445	218 977	4 935	10 070	194 174	702 024	371 214	1 012 388	60 850
Establishments with 100 to 249 employees	-	70	70	10 689	489 840	9 570	20 407	427 481	1 736 439	842 990	2 182 283	397 146
Establishments with 250 to 499 employees	-	46	46	16 531	841 630	14 174	31 058	700 497	3 257 254	1 441 182	4 211 150	487 286
Establishments with 500 to 999 employees	-	17	17	10 321	495 206	8 957	18 244	412 703	1 648 789	635 150	2 085 122	198 817
Establishments with 1,000 to 2,499 employees	-	-	-	-	-	-	-	-	-	-	-	-
Establishments with 2,500 employees or more	-	-	-	-	-	-	-	-	-	-	-	-
Administrative records ²	9	117	-	1 049	30 705	923	1 426	27 424	83 610	33 689	110 450	6 849

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212112, BITUMINOUS COAL UNDERGROUND MINING								
All establishments	614	375	50 197	2 295 060	44 130	91 621	1 955 751	8 183 253
Producing establishments	599	372	49 854	2 280 602	43 837	91 205	1 944 953	8 186 721
Mines or wells only	432	216	16 434	642 241	14 922	29 076	572 724	1 885 281
Underground mines	432	216	16 434	642 241	14 922	29 076	572 724	1 885 281
Open-pit mines	-	-	-	-	-	-	-	-
Combination mines, well operations, or other types of mines	-	-	-	-	-	-	-	-
Mines with preparation plants	167	156	33 420	1 638 361	28 915	62 129	1 372 229	6 301 440
Underground mines	167	156	33 420	1 638 361	28 915	62 129	1 372 229	6 301 440
Open-pit mines	-	-	-	-	-	-	-	-
Combination mines or other types of mines	-	-	-	-	-	-	-	-
Separately operated preparation plants	-	-	-	-	-	-	-	-
Undistributed ¹	-	-	-	-	-	-	-	-
Nonproducing establishments	15	3	343	14 458	293	416	10 798	S

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212112	Bituminous coal from underground operations #	X	X	10 703 830	X	X	12 451 786
2121121	Run-of-mine (raw) bituminous coal shipped from underground mining operations	X	X	2 196 694	X	X	3 049 268
21211211	Run-of-mine (raw) bituminous coal shipped from underground mining operations, for use without processing	X	X	159 886	X	X	N
212112111	Run-of-mine (raw) bituminous coal shipped from underground mining operations, for use without processing	X	7.8	159 886	X	14.9	318 540
21211212	Run-of-mine (raw) bituminous coal shipped from underground mining operations, for processing at other establishments #	X	X	2 036 808	X	X	N
2121121221	Run-of-mine (raw) bituminous coal shipped from underground mining operations, for processing at other establishments	X	137.8	2 036 808	X	185.0	2 730 728
2121123	Processed bituminous coal shipped from underground mining operations	X	X	8 168 621	X	X	8 890 809
21211231	Processed bituminous coal shipped from underground mining operations, washed by wet-washing, pneumatic, or other methods	X	X	7 296 445	X	X	N
2121123111	Processed bituminous coal shipped from underground mining operations, washed by wet-washing, pneumatic, or other methods	X	261.4	7 296 445	X	262.0	7 892 690
21211232	Processed bituminous coal shipped from underground mining operations (mechanically crushed, screened, or sized only)	X	X	872 176	X	X	N
2121123221	Processed bituminous coal shipped from underground mining operations (mechanically crushed, screened, or sized only)	X	46.3	872 176	X	45.1	998 119
212112W	Bituminous coal underground mining, nsk	X	X	338 515	X	X	511 709
212112WY	Bituminous coal underground mining, nsk	X	X	338 515	X	X	N
212112WYWT	Bituminous coal underground mining, nsk #	X	X	338 515	X	X	511 709

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2121121	RUN-OF-MINE (RAW) BITUMINOUS COAL SHIPPED FROM UNDERGROUND MINING OPERATIONS		
	United States	2 196 694	3 049 268
	Kentucky	702 586	878 304
	Pennsylvania	376 224	418 440
	Utah	19 598	N
	Virginia	316 423	541 038
	West Virginia	548 100	875 858
2121123	PROCESSED BITUMINOUS COAL SHIPPED FROM UNDERGROUND MINING OPERATIONS		
	United States	8 168 621	8 890 809
	Alabama	694 021	570 106
	Colorado	217 983	214 246
	Illinois	567 590	969 603
	Indiana	145 337	64 847
	Kentucky	1 530 231	1 613 823
	Ohio	420 571	353 939
	Pennsylvania	880 533	1 020 606
	Utah	566 812	418 759
	Virginia	583 861	718 535
	West Virginia	2 419 384	2 811 609

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212112	BITUMINOUS COAL UNDERGROUND MINING				
	SUPPLIES CONSUMED BY TYPE				
21211005	Run-of-mine (raw) coal received for washing using wet-washing, pneumatic, or other methods mil s tons..	20.4	276 910	30.6	450 063
21211007	Run-of-mine (raw) coal mined and processed at same establishment by washing (wet-washing, pneumatic, or other methods) mil s tons..	413.4	X	382.3	X
21211009	Run-of-mine (raw) coal received for processing by other methods; such as mechanical crushing, screening, or sizing mil s tons..	-	-	3.0	55 571
21211011	Run-of-mine (raw) coal mined and processed at same establishment by other methods-mechanically crushing/screening/sizing mil s tons..	49.6	X	46.3	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	615 389	X	798 676
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	581 785	X	577 160
31320029	Filter and brattice cloth	X	12 786	X	22 276
11300000	Round or hewn wood products and stumpage	X	53 267	X	61 486
32592003	Explosive materials, except ammonium nitrate	X	5 028	X	9 686
32592005	Ammonium nitrate	X	7 557	X	10 104
32592007	Blasting accessories	X	3 950	X	4 194
32419100	Lubricating oils and greases, including hydraulic oils	X	48 612	X	56 079
32621001	Tires and inner tubes	X	21 659	X	23 782
32600009	Rubber and plastics products (hose, conveyor belting, etc.) except tires, tubes, and gaskets	X	108 711	X	85 072
32700037	Concrete products	X	25 120	X	18 529
32799217	Nonmetallic mineral products (rock dust, other prepared nonmetallic minerals and earths, etc.)	X	34 818	X	32 568
33120049	Steel shapes and forms, except castings, forgings, and wire products	X	68 605	X	58 814
33100085	Nonferrous metal wire including trolley wire	X	19 022	X	13 854
33272200	Roof bolts	X	165 118	X	208 711
33290007	Wire rope, cable, springs, and other fabricated wire products, excluding wire	X	16 053	X	19 182
33300005	Drill bits and reamers	X	47 777	X	54 831
00970098	All other supplies	X	434 555	X	472 459
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	212 341	X	196 978
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel1,000 s tons..	D	D	D	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	655.9	20 584	1 179.9	37 227
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel1,000 barrels..	144.8	4 051	226.0	7 055
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	0.5	2 552	0.5	1 577
32411015	Gasoline used as a fuel mil gal..	4.0	4 383	7.4	6 988
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	D	X	D
00974000	Undistributed fuels#	X	10 584	X	12 325
21211013	Coal (bituminous, subbituminous, lignite, and anthracite) produced and used in the same plant as a fuel1,000 s tons..	221.4	X	258.3	X

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212112 BITUMINOUS COAL UNDERGROUND MINING

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) the underground mining of bituminous coal; (2) developing bituminous coal underground mine sites; and (3) the underground mining and beneficiating bituminous coal (e.g., cleaning, washing, screening, and sizing coal).

The data published with NAICS code 212112 include the following SIC industry:

1222 Bituminous coal underground mining

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 212112	Value of net shipments for 1997 is 10,088,405 thousand dollars. In 1992 it was 11,434,443 thousand dollars. Net shipments represent gross shipments excluding coal not specified by kind and less coal recieved for preparation.
# 21211212	Includes estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).
# 212112WYWT	Represents value for establishments that did not report detailed data.

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325W	14590	14590
2121133	12312	12312	212291WYWT	1094000	1094000	212325WYWT	1459000	1459000
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14741
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14742
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14744
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474100
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474200
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474400
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913	14743	14743
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913111	1474301	1474301
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913121	1474303	1474303
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913YVW	14743XX	14743XX
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391W	14740	14740
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391WYWT	1474000	1474000
2122103131	1011207	1011207	212299W pt.	1099000 pt	1099000 pt	2123921	14751	14751
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
212210W	10110	10110	212310	14110	14110	2123921100 pt	1475100 pt	1475103
212210WYWT	1011000	1011000	2123101011	1411011	1411011	2123921100 pt	1475100 pt	1475105
2122211	10411	10411	2123101021	1411015	1411015	2123923	14752	14752
2122211111	1041104	1041104	2123101021	1411019	1411019	2123923111 pt	1475202 pt	1475201
2122211121	1041121	1041121	2123101031	1411019	1411019	2123923111 pt	1475202 pt	1475203
2122211131	1041123	1041123	21231010YWT	1411000	1411000	2123923111 pt	1475202 pt	1475205
2122211YVW	10411XX	10411XX	2123120	14220	14220	2123923131	1475207	1475207
2122213	10412	10412	2123120100	1422000	1422000	2123923YVW	14752XX	14752XX
2122213100	1041200	1041200	2123120YWT	14220XX	14220XX	212392W	14750	14750
2122215	10413	10413	2123130	14230	14230	212392WYWT	1475000	1475000
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931	14791	14791
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123931100	1479100	1479100
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933	14793	14793
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123933100	1479300	1479300
212221WYWT	1041000	1041000	2123190 pt.	1499A pt	14992 pt	2123935	14794	14794
2122221	10441	10441	2123190111	1499A22	1499200 pt	2123935100	1479400	1479400
2122221111	1044104	1044104	2123190121	1429000	1429000	2123939	14798	14798
2122221121	1044121	1044121	2123190YWT pt	14290XX	14290XX	2123939100	1479800	1479800
2122221131	1044123	1044123	2123211	14421	14421	212393W	14790	14790
2122221YVW	10441XX	10441XX	2123211111	1442101	1442101	212393WYWT	1479000	1479000
2122223	10442	10442	2123211121	1442105	1442105	2123991	14996	14996
2122223100	1044200	1044200	2123211YVW	14421XX	14421XX	2123991100	1499600	1499600
2122225	10443	10443	2123213	14422	14422	2123993	14997	14997
2122225111	1044303	1044303	2123213111	1442201	1442201	2123993100 pt	1499701 pt	1499712
2122225121	1044307	1044307	2123213221	1442205	1442205	2123993100 pt	1499701 pt	1499722
2122225YVW	10443XX	10443XX	2123213YVW	14422XX	14422XX	2123995	14998	14998
212222W	10440	10440	212321W	14420	14420	2123995100 pt	1499801 pt	1499812
212222WYWT	1044000	1044000	212321WYWT	1442000	1442000	2123995100 pt	1499801 pt	1499822
2122311	10311	10311	2123221	14461	14461	2123999 pt.	1499A pt	14991
2122311111	1031104	1031104	2123221100	1446100	1446100	2123999 pt.	1499A pt	14992 pt
2122311121	1031121	1031121	2123223	14465	14465	2123999 pt.	1499A pt	14993
2122311131	1031123	1031123	2123223100	1446500	1446500	2123999 pt.	1499A pt	14994
2122311YVW	10311XX	10311XX	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122313	10312	10312	2123229100	1446900	1446900			
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Anthracite Mining

1997

Issued July 1999

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1997 Economic Census

Mining

Industry Series



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Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212113	Anthracite mining	57	68	1 094	34 726	886	1 665	26 035	96 632	116 824	177 769	35 687
123100	Anthracite mining	N	68	1 094	34 726	886	1 665	26 035	96 632	116 824	177 769	35 687

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212113, ANTHRACITE MINING												
United States	1	68	14	1 094	34 726	886	1 665	26 035	96 632	116 824	177 769	35 687
Pennsylvania	1	68	14	1 094	34 726	886	1 665	26 035	96 632	116 824	177 769	35 687

¹Some payroll and sales data for small single-unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212113, ANTHRACITE MINING		212113, ANTHRACITE MINING—Con.	
Companies ¹	57	Value of primary products shipments or services produced in all industries	\$1,000.. 169 563
All establishments	68	Value of primary products shipments or services produced in this industry	\$1,000.. 169 563
Establishments with 0 to 19 employees	54	Value of primary products shipments or services produced in other industries	\$1,000.. —
Establishments with 20 to 99 employees	13	Value added by mining	\$1,000.. 96 632
Establishments with 100 employees or more	1	Total inventories, end of 1996	\$1,000.. 14 562
All employees for pay period including March 12	1 094	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 12 528
Annual payroll	34 726	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 2 034
Annual fringe benefits not included in payroll	14 569	Total inventories, end of 1997	\$1,000.. 17 532
Production, development, and exploration workers for pay period including March 12	886	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 15 128
Production, development, and exploration worker annual hours	1 665	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 2 404
Production, development, and exploration worker annual wages	26 035	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 173 776
Total cost of supplies	\$1,000.. 116 824	Capital expenditures (except land and mineral rights)	\$1,000.. 35 687
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 86 523	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. D
Cost of resales	\$1,000.. D	Capital expenditures for mineral exploration and development	\$1,000.. D
Cost of purchased fuels consumed	\$1,000.. 6 041	Capital expenditures for mineral land and rights	\$1,000.. 183
Cost of purchased electricity	\$1,000.. 6 090	Deductions from depreciable/depletable assets during year	\$1,000.. 9 848
Cost of contract work	\$1,000.. D	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 199 798
Quantity of electricity purchased	1,000 kWh.. 89 914	Total depreciation/depletion charges during year	\$1,000.. 14 788
Quantity of electricity generated less sold	1,000 kWh.. —	Total rental payments during year	\$1,000.. 4 791
Cost of purchased communications services	\$1,000.. 184	Rental payments for buildings and other structures	\$1,000.. 313
Total value of shipments and receipts	\$1,000.. 177 769	Rental payments for machinery and equipment	\$1,000.. 4 478
Primary products value of shipments	\$1,000.. 169 563	Lease rents	\$1,000.. D
Secondary products value of shipments and receipts for services	\$1,000.. D	Expensed mineral exploration, development, land, and rights	\$1,000.. 7 410
Value of resales	\$1,000.. D		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	
	E ¹	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)					Annual wages (\$1,000)
212113, ANTHRACITE MINING												
All establishments	1	68	14	1 094	34 726	886	1 665	26 035	96 632	116 824	177 769	35 687
Establishments with 0 to 4 employees	3	30	—	87	1 705	64	96	1 495	4 713	D	9 159	D
Establishments with 5 to 9 employees	3	11	—	64	1 814	48	91	1 166	4 447	2 971	7 156	262
Establishments with 10 to 19 employees	1	13	—	169	4 167	121	226	3 063	12 490	13 311	25 129	672
Establishments with 20 to 49 employees	1	10	10	292	9 781	246	493	8 170	26 583	43 836	68 368	2 051
Establishments with 50 to 99 employees	—	3	3	D	D	D	D	D	D	D	D	D
Establishments with 100 to 249 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	24	—	79	1 213	57	87	1 032	3 130	1 581	4 411	300

¹Some payroll and sales data for small single-unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212113, ANTHRACITE MINING								
All establishments	68	14	1 094	34 726	886	1 665	26 035	96 632
Producing establishments	64	14	1 083	34 498	876	1 654	25 822	96 667
Mines or wells only	49	9	586	13 997	489	885	11 560	55 248
Underground mines	1	—	D	D	D	D	D	D
Open-pit mines	44	7	482	11 398	399	703	9 550	43 058
Combination mines, well operations, or other types of mines	4	2	D	D	D	D	D	D
Mines with preparation plants	12	3	D	D	D	D	D	D
Underground mines	1	—	D	D	D	D	D	D
Open-pit mines	6	1	274	11 775	214	402	7 526	17 918
Combination mines or other types of mines	5	2	156	5 471	120	270	3 843	22 543
Separately operated preparation plants	3	2	D	D	D	D	D	D
Undistributed ¹	—	—	—	—	—	—	—	—
Nonproducing establishments	4	—	11	228	10	11	213	S

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212113	Anthracite #	X	X	169 563	X	X	150 941
2121131	Run-of-mine (raw) anthracite	X	X	50 893	X	X	20 327
21211311	Run-of-mine (raw) anthracite shipped	X	X	50 893	X	X	N
212113111	Run-of-mine (raw) anthracite shipped for use without processing	X	442.1	7 421	X	—	—
2121131121	Run-of-mine (raw) anthracite shipped for processing at other establishments #	X	2 242.9	43 472	X	826.4	20 327
2121133	Processed anthracite	X	X	106 487	X	X	117 126
21211331	Processed anthracite shipped	X	X	106 487	X	X	N
2121133111	Processed anthracite, washed by wet-washing, pneumatic, or other methods	X	1 344.6	89 823	X	1 733.1	111 010
2121133121	Processed anthracite (mechanically crushed, screened, or sized only)	X	507.8	16 664	X	157.3	6 116
212113W	Anthracite mining, nsk	X	X	12 183	X	X	13 488
212113WY	Anthracite mining, nsk #	X	X	12 183	X	X	N
212113WYWT	Anthracite mining, nsk #	X	X	12 183	X	X	13 488

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2121131	RUN-OF-MINE (RAW) ANTHRACITE		
	United States	50 893	20 327
	Pennsylvania	50 893	20 327
2121133	PROCESSED ANTHRACITE		
	United States	106 487	117 126
	Pennsylvania	106 487	117 126

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212113	ANTHRACITE MINING				
	SUPPLIES CONSUMED BY TYPE				
21211005	Run-of-mine (raw) coal received for washing using wet-washing, pneumatic, or other methods mil s tons..	D	D	0.5	10 776
21211007	Run-of-mine (raw) coal mined and processed at same establishment by washing (wet-washing, pneumatic, or other methods) mil s tons..	1.9	X	3.4	X
21211009	Run-of-mine (raw) coal received for processing by other methods; such as mechanical crushing, screening, or sizing mil s tons..	0.6	9 543	D	D
21211011	Run-of-mine (raw) coal mined and processed at same establishment by other methods-mechanically crushing/screening/sizing mil s tons..	D	X	0.1	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	21 986	X	1 452
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	7 282	X	D
31320029	Filter and brattice cloth	X	D	X	D
11300000	Round or hewn wood products and stumpage	X	53	X	D
32592003	Explosive materials, except ammonium nitrate	X	707	X	392
32592005	Ammonium nitrate	X	870	X	D
32592007	Blasting accessories	X	D	X	D
32419100	Lubricating oils and greases, including hydraulic oils	X	410	X	1 067
32621001	Tires and inner tubes	X	1 552	X	816
32600009	Rubber and plastics products (hose, conveyor belting, etc.) except tires, tubes, and gaskets	X	269	X	288
32700037	Concrete products	X	19	X	D
32799217	Nonmetallic mineral products (rock dust, other prepared nonmetallic minerals and earths, etc.)	X	D	X	D
33120049	Steel shapes and forms, except castings, forgings, and wire products	X	1 099	X	1 463
33100085	Nonferrous metal wire including trolley wire	X	D	X	D
33272200	Roof bolts	X	D	X	D
33290007	Wire rope, cable, springs, and other fabricated wire products, excluding wire	X	121	X	402
33300005	Drill bits and reamers	X	144	X	433
00970098	All other supplies	X	5 991	X	4 968
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	5 695	X	14 205
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel1,000 s tons..	-	-	-	-
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	97.2	3 003	76.3	2 211
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels..	35.8	1 216	D	D
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	D	D	D	D
32411015	Gasoline used as a fuel mil gal..	0.3	342	1.2	1 199
21211013	Coal (bituminous, subbituminous, lignite, and anthracite) produced and used in the same plant as a fuel 1,000 s tons..	D	X	D	X
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	-	X	-
00974000	Undistributed fuels#	X	D	X	D

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class.	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212113 ANTHRACITE MINING

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) mining anthracite coal; (2) developing anthracite coal mining sites; and (3) beneficiating anthracite coal (e.g., cleaning, washing, screening, and sizing coal).

The data published with NAICS code 212113 include the following SIC industry:

1231 Anthracite mining

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 212113.....	QUANTITY AND VALUE OF NET SHIPMENTS IN 1997 ARE 2,294.5 THOUSAND SHORT TONS AND 113.9 MILLION DOLLARS. IN 1992 THEY WERE 1,890.4 THOUSAND SHORT TONS AND 117.1 MILLION DOLLARS. NET SHIPMENTS REPRESENT RAW COAL FOR USE WITHOUT PREPARATION PLUS PREPARED COAL.
# 2121131121	INCLUDES ESTIMATES FOR SMALL COMPANIES (ESTIMATES WERE MADE FROM ADMINISTRATIVE-RECORD DATA RATHER THAN COLLECTED FROM RESPONDENTS).
# 212113WYWT	REPRESENTS VALUE FOR ESTABLISHMENTS THAT DID NOT REPORT DETAILED DATA.

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	REPRESENTS COST FOR ESTABLISHMENTS THAT DID NOT REPORT DETAILED DATA, INCLUDING ESTABLISHMENTS THAT WERE NOT MAILED A FORM.
# 00974000	REPRESENTS COST FOR ESTABLISHMENTS THAT DID NOT REPORT DETAILED DATA, INCLUDING ESTABLISHMENTS THAT WERE NOT MAILED A FORM.

Appendix G.

Comparability of Product Classes and Product Codes:

1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325WYWT	1459000	1459000
2121133	12312	12312	212291WYWT	1094000	1094000	2123911 pt.	14745 pt	14741
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14742
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14744
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911100 pt	1474500 pt	1474100
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474200
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474400
2122101	10111	10111	2122993121	1099731	1099731	2123913	14743	14743
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913111	1474301	1474301
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913121	1474303	1474303
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913YVW	14743XX	14743XX
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	212391W	14740	14740
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391WYWT	1474000	1474000
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	2123921	14751	14751
2122103131	1011207	1011207	212299W pt.	10990 pt	10990 pt	2123921100 pt	1475100 pt	1475101
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099000 pt	2123921100 pt	1475100 pt	1475105
212210W	10110	10110	212299WYWT pt.	1099000 pt	1099700	2123923	14752	14752
212210WYWT	1011000	1011000	212310	14110	14110	2123923111 pt	1475202 pt	1475201
2122211	10411	10411	2123101011	1411011	1411011	2123923111 pt	1475202 pt	1475203
2122211111	1041104	1041104	2123101021	1411015	1411015	2123923111 pt	1475202 pt	1475205
2122211121	1041121	1041121	2123101031	1411019	1411019	2123923131	1475207	1475207
2122211131	1041123	1041123	212310YWT	1411000	1411000	2123923YVW	14752XX	14752XX
2122211YVW	10411XX	10411XX	2123120	14220	14220	212392W	14750	14750
2122213	10412	10412	2123120100	1422000	1422000	212392WYWT	1475000	1475000
2122213100	1041200	1041200	2123120YWT	14220XX	14220XX	2123931	14791	14791
2122215	10413	10413	2123130	14230	14230	2123931100	1479100	1479100
2122215111	1041303	1041303	2123130100	1423000	1423000	2123933	14793	14793
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123933100	1479300	1479300
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123935	14794	14794
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123935100	1479400	1479400
212221WYWT	1041000	1041000	2123190 pt.	14990 pt	14990 pt	2123939	14798	14798
2122221	10441	10441	2123190 pt.	14990 pt	14990 pt	2123939100	1479800	1479800
2122221111	1044104	1044104	2123211	14421	14421	212393W	14790	14790
2122221121	1044121	1044121	2123211111	1442101	1442101	212393WYWT	1479000	1479000
2122221131	1044123	1044123	2123211121	1442105	1442105	2123991	14996	14996
2122221YVW	10441XX	10441XX	2123211YVW	14421XX	14421XX	2123991100	1499600	1499600
2122223	10442	10442	2123213	14422	14422	2123993	14997	14997
2122223100	1044200	1044200	2123213111	1442201	1442201	2123993100 pt	1499701 pt	1499712
2122225	10443	10443	2123213221	1442205	1442205	2123993100 pt	1499701 pt	1499722
2122225111	1044303	1044303	2123213YVW	14422XX	14422XX	2123995	14998	14998
2122225121	1044307	1044307	212321W	14420	14420	2123995100 pt	1499801 pt	1499812
2122225YVW	10443XX	10443XX	212321WYWT	1442000	1442000	2123995100 pt	1499801 pt	1499822
212222W	10440	10440	2123221	14461	14461	2123999 pt.	1499A pt	14991
212222WYWT	1044000	1044000	2123221100	1446100	1446100	2123999 pt.	1499A pt	14992 pt
2122311	10311	10311	2123223	14465	14465	2123999 pt.	1499A pt	14993
2122311111	1031104	1031104	2123223100	1446500	1446500	2123999 pt.	1499A pt	14994
2122311121	1031121	1031121	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122311131	1031123	1031123	2123229100	1446900	1446900			
2122311YVW	10311XX	10311XX						
2122313	10312	10312						
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Iron Ore Mining

1997

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212210	Iron ore mining	26	32	7 920	393 921	6 787	15 326	330 553	983 940	1 044 666	1 937 749	90 857
101100	Iron ores	N	32	7 920	393 921	6 787	15 326	330 553	983 940	1 044 666	1 937 749	90 857

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212210, IRON ORE MINING												
United States	-	32	12	7 920	393 921	6 787	15 326	330 553	983 940	1 044 666	1 937 749	90 857

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212210, IRON ORE MINING		212210, IRON ORE MINING—Con.	
Companies ¹	26	Value of primary products shipments or services produced in all industries	\$1,000.. 1 915 930
All establishments	32	Value of primary products shipments or services produced in this industry	\$1,000.. 1 915 930
Establishments with 0 to 19 employees	20	Value of primary products shipments or services produced in other industries	\$1,000.. —
Establishments with 20 to 99 employees	2	Value added by mining	\$1,000.. 983 940
Establishments with 100 employees or more	10	Total inventories, end of 1996	\$1,000.. 223 608
All employees for pay period including March 12	7 920	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 114 110
Annual payroll	393 921	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 109 498
Annual fringe benefits not included in payroll	147 850	Total inventories, end of 1997	\$1,000.. 216 608
Production, development, and exploration workers for pay period including March 12	6 787	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 111 160
Production, development, and exploration worker annual hours	15 326	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 105 448
Production, development, and exploration worker annual wages	330 553	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 3 234 502
Total cost of supplies	\$1,000.. 1 044 666	Capital expenditures (except land and mineral rights)	\$1,000.. 90 857
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 603 797	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 81 437
Cost of resales	\$1,000.. D	Capital expenditures for mineral exploration and development	\$1,000.. 9 420
Cost of purchased fuels consumed	\$1,000.. 117 001	Capital expenditures for mineral land and rights	\$1,000.. 106
Cost of purchased electricity	\$1,000.. 258 971	Deductions from depreciable/depletable assets during year	\$1,000.. 36 405
Cost of contract work	\$1,000.. D	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 3 289 060
Quantity of electricity purchased	1,000 kWh.. 6 233 554	Total depreciation/depletion charges during year	\$1,000.. 128 570
Quantity of electricity generated less sold	1,000 kWh.. —	Total rental payments during year	\$1,000.. 34 258
Cost of purchased communications services	\$1,000.. 481	Rental payments for buildings and other structures	\$1,000.. 41
Total value of shipments and receipts	\$1,000.. 1 937 749	Rental payments for machinery and equipment	\$1,000.. 34 217
Primary products value of shipments	\$1,000.. 1 915 930	Lease rents	\$1,000.. D
Secondary products value of shipments and receipts for services	\$1,000.. D	Expensed mineral exploration, development, land, and rights	\$1,000.. 20 269
Value of resales	\$1,000.. D		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	
	E ¹	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)					Annual wages (\$1,000)
212210, IRON ORE MINING												
All establishments	—	32	12	7 920	393 921	6 787	15 326	330 553	983 940	1 044 666	1 937 749	90 857
Establishments with 0 to 4 employees	5	9	—	16	391	11	17	301	1 382	547	1 821	108
Establishments with 5 to 9 employees	9	3	—	18	702	15	22	486	1 930	803	2 516	217
Establishments with 10 to 19 employees	6	8	—	112	3 376	92	124	2 403	8 313	8 469	15 927	855
Establishments with 20 to 49 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 50 to 99 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 100 to 249 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees	—	3	3	D	D	D	D	D	D	D	D	D
Establishments with 1,000 to 2,499 employees	—	3	3	D	D	D	D	D	D	D	D	D
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	13	—	103	2 799	84	109	1 945	7 695	3 200	10 031	864

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212210, IRON ORE MINING								
All establishments	32	12	7 920	393 921	6 787	15 326	330 553	983 940
Producing establishments	30	12	D	D	D	D	D	D
Mines or wells only	18	2	203	7 037	172	277	5 221	56 499
Underground mines	-	-	-	-	-	-	-	-
Open-pit mines	18	2	203	7 037	172	277	5 221	56 499
Combination mines, well operations, or other types of mines	-	-	-	-	-	-	-	-
Mines with preparation plants	9	9	7 512	376 719	6 434	14 697	316 482	897 337
Underground mines	1	1	D	D	D	D	D	D
Open-pit mines	8	8	D	D	D	D	D	D
Combination mines or other types of mines	-	-	-	-	-	-	-	-
Separately operated preparation plants	3	1	D	D	D	D	D	D
Undistributed ¹	-	-	-	-	-	-	-	-
Nonproducing establishments	2	-	D	D	D	D	D	D

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997		1992			
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212210	Iron ore #	X	X	1 915 930	X	X	1 715 217
2122101	Crude iron ore	X	X	D	X	X	D
21221011	Crude iron ore	X	X	D	X	X	N
2122101111	Direct-shipping crude iron ore #	2.6	2.4	20 258	0.7	0.6	4 677
2122101121	Crude iron ore for treatment, concentration, etc. mil metric tons ..	209.2	D	D	183.2	D	D
2122103	Iron ore concentrates and agglomerates	X	X	1 838 537	X	X	1 686 351
21221031	Iron ore concentrates and agglomerates	X	X	1 838 537	X	X	N
2122103111	Iron ore concentrates (including washed material) for consumption	0.4	0.4	17 768	0.6	0.6	28 492
2122103121	Iron ore concentrates (including washed material) for agglomeration plants not at blast furnaces	61.7	-	-	56.9	-	-
2122103131	Iron agglomerates (pellets, sinter, briquets, and other)	61.0	60.4	1 820 769	54.6	55.8	1 657 859
212210W	Iron ores, nsk	X	X	D	X	X	D
212210WY	Iron ores, nsk	X	X	D	X	X	N
212210WYWWT	Iron ores, nsk #	X	X	D	X	X	D

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2122101	CRUDE IRON ORE		
	United States	D	D
2122103	IRON ORE CONCENTRATES AND AGGLOMERATES		
	United States	1 838 537	1 686 351

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212210	IRON ORE MINING				
	SUPPLIES CONSUMED BY TYPE				
21221001	Crude iron ore received for concentrationmil metric tons (wet basis)..	D	D	D	D
21221003	Crude iron ore produced and concentrated at same establishment.....mil metric tons (wet basis)..	196.8	X	179.2	X
21221007	Iron ore concentrates produced and agglomerated at same establishment mil metric tons (dry basis)..	61.0	X	55.4	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	51 661	X	33 053
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	126 611	X	76 381
21232009	Bentonite and other clay nonmetallic minerals	X	34 043	X	20 856
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	32 366	X	17 459
32592013	Explosive materials (except ammonium nitrate) and blasting accessories	X	17 529	X	14 978
32592005	Ammonium nitrate	X	18 725	X	6 289
32621001	Tires and inner tubes	X	D	X	8 494
33151003	Iron and steel castings	X	61 144	X	D
33211101	Iron and steel forgings	X	36 998	X	D
33120059	Steel shapes and forms, except castings and forgings	X	D	X	27 481
00970098	All other supplies	X	111 687	X	N
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	2 521	X	1 896
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel.....1,000 s tons..	D	D	D	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	910.7	24 505	669.6	17 794
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel.....1,000 barrels..	-	-	D	D
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	34.3	80 835	29.7	59 765
32411015	Gasoline used as a fuel	1.4	1 296	1.1	1 021
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	5 340	X	4 465
00974000	Undistributed fuels#	X	D	X	D

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212210 IRON ORE MINING

This U.S. industry comprises establishments primarily engaged in (1) developing mine sites, mining, and/or beneficiating (i.e., preparing) iron ores and manganiferous ores valued chiefly for their iron content and/or (2) producing sinter iron ore (except iron ore produced in iron and steel mills) and other iron ore agglomerates.

The data published with NAICS code 212210 include the following SIC industry:

1011 Iron ores

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 212210	# Net shipments represented by the sum of direct-shipping ore, iron ore concentrates for consumption, and iron agglomerates were 63.2 million metric tons and 1,858.8 million dollars for 1997.
# 2122101111	# Includes estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).
# 212210WYWT	# Represents value for establishments that did not report detailed data.

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	# Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	# Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325WYWT	1459000	1459000
2121133	12312	12312	212291WYWT	1094000	1094000	2123911 pt.	14745 pt	14741
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14742
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14744
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911100 pt	1474500 pt	1474100
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474200
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474400
2122101	10111	10111	2122993121	1099731	1099731	2123913	14743	14743
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913111	1474301	1474301
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913121	1474303	1474303
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913YVW	14743XX	14743XX
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	212391W	14740	14740
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391WYWT	1474000	1474000
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	2123921	14751	14751
2122103131	1011207	1011207	212299WYWT pt.	1099000 pt	1099000 pt	2123921100 pt	1475100 pt	1475101
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099700	2123921100 pt	1475100 pt	1475105
212210W	10110	10110	2123110	14110	14110	2123923	14752	14752
212210WYWT	1011000	1011000	2123110111	1411011	1411011	2123923111 pt	1475202 pt	1475201
2122211	10411	10411	2123110121	1411015	1411015	2123923111 pt	1475202 pt	1475203
2122211111	1041104	1041104	2123110221	1411019	1411019	2123923111 pt	1475202 pt	1475205
2122211121	1041121	1041121	2123110YWT	1411000	1411000	2123923131	1475207	1475207
2122211131	1041123	1041123	2123120	14220	14220	2123923YVW	14752XX	14752XX
2122211YVW	10411XX	10411XX	2123120100	1422000	1422000	212392W	14750	14750
2122213	10412	10412	2123120YWT	14220XX	14220XX	212392WYWT	1475000	1475000
2122213100	1041200	1041200	2123130	14230	14230	2123931	14791	14791
2122215	10413	10413	2123130100	1423000	1423000	2123931100	1479100	1479100
2122215111	1041303	1041303	2123130YWT	14230XX	14230XX	2123933	14793	14793
2122215121	1041307	1041307	2123190 pt.	14290	14290	2123933100	1479300	1479300
2122215YVW	10413XX	10413XX	2123190 pt.	14990 pt	14990 pt	2123935	14794	14794
212221W	10410	10410	2123190 pt.	1499A pt	14992 pt	2123935100	1479400	1479400
212221WYWT	1041000	1041000	2123190111	1499A22	1499200 pt	2123939	14798	14798
2122221	10441	10441	2123190121	1429000	1429000	2123939100	1479800	1479800
2122221111	1044104	1044104	2123190YWT pt	14290XX	14290XX	212393W	14790	14790
2122221121	1044121	1044121	2123190YWT pt	1499000 pt	1499000 pt	212393WYWT	1479000	1479000
2122221131	1044123	1044123	2123211	14421	14421	2123991	14996	14996
2122221YVW	10441XX	10441XX	2123211111	1442101	1442101	2123991100	1499600	1499600
2122223	10442	10442	2123211121	1442105	1442105	2123993	14997	14997
2122223100	1044200	1044200	2123211YVW	14421XX	14421XX	2123993100 pt	1499701 pt	1499712
2122225	10443	10443	2123213	14422	14422	2123993100 pt	1499701 pt	1499722
2122225111	1044303	1044303	2123213111	1442201	1442201	2123995	14998	14998
2122225121	1044307	1044307	2123213221	1442205	1442205	2123995100 pt	1499801 pt	1499812
2122225YVW	10443XX	10443XX	2123213YVW	14422XX	14422XX	2123995100 pt	1499801 pt	1499822
212222W	10440	10440	212321W	14420	14420	2123999	1499A	1499A
212222WYWT	1044000	1044000	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14992 pt
2122231	10311	10311	2123221	14461	14461	2123999 pt.	1499A pt	14993
2122231111	1031104	1031104	2123221100	1446100	1446100	2123999 pt.	1499A pt	14994
21222311121	1031121	1031121	2123223	14465	14465	2123999 pt.	1499A pt	14995
21222311131	1031123	1031123	2123223100	1446500	1446500	2123999 pt.	1499A pt	14995
2122231YVW	10311XX	10311XX	2123229	14469	14469	2123999 pt.	1499A pt	14995
21222313	10312	10312	2123229100	1446900	1446900			
21222313111	1031201	1031201						
21222313121	1031221	1031221						
21222313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Gold Ore Mining

1997

Issued December 1999

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1997 Economic Census

Mining

Industry Series



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Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Com-panies ¹	All estab-lish-ments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212221 104100	Gold ore mining	249	301	17 509	777 714	15 492	32 038	674 983	2 786 188	2 304 880	3 952 066	1 139 037
	Gold ores	N	301	17 509	777 714	15 492	32 038	674 983	2 786 188	2 304 880	3 952 066	1 139 037

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
		Total	With 20 em-ploy-ees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212221, GOLD ORE MINING												
United States	-	301	79	17 509	777 714	15 492	32 038	674 983	2 786 188	2 304 880	3 952 066	1 139 037
Arizona	2	16	1	225	7 545	162	344	6 144	16 950	5 188	15 732	6 406
Colorado	1	31	4	583	26 436	502	1 001	20 519	75 768	37 304	95 546	17 526

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212221, GOLD ORE MINING		212221, GOLD ORE MINING—Con.	
Companies ¹	249	Value of primary products shipments or services produced in all industries	\$1,000.. 3 933 234
All establishments	301	Value of primary products shipments or services produced in this industry	\$1,000.. D
Establishments with 0 to 19 employees	222	Value of primary products shipments or services produced in other industries	\$1,000.. D
Establishments with 20 to 99 employees	39	Value added by mining	\$1,000.. 2 786 188
Establishments with 100 employees or more	40	Total inventories, end of 1996	\$1,000.. 584 313
All employees for pay period including March 12	17 509	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 415 731
Annual payroll	777 714	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 168 582
Annual fringe benefits not included in payroll	231 915	Total inventories, end of 1997	\$1,000.. 594 259
Production, development, and exploration workers for pay period including March 12	15 492	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 418 464
Production, development, and exploration worker annual hours	32 038	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 175 795
Production, development, and exploration worker annual wages	674 983	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 6 978 518
Total cost of supplies	\$1,000.. 2 304 880	Capital expenditures (except land and mineral rights)	\$1,000.. 1 139 037
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 1 597 678	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 922 668
Cost of resales	\$1,000.. —	Capital expenditures for mineral exploration and development	\$1,000.. 216 369
Cost of purchased fuels consumed	\$1,000.. 167 725	Capital expenditures for mineral land and rights	\$1,000.. 207 213
Cost of purchased electricity	\$1,000.. 190 612	Deductions from depreciable/depletable assets during year	\$1,000.. 279 803
Cost of contract work	\$1,000.. 348 865	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 8 044 965
Quantity of electricity purchased	1,000 kWh.. 4 479 792	Total depreciation/depletion charges during year	\$1,000.. 643 284
Quantity of electricity generated less sold	1,000 kWh.. D	Total rental payments during year	\$1,000.. 31 571
Cost of purchased communications services	\$1,000.. S	Rental payments for buildings and other structures	\$1,000.. 2 950
Total value of shipments and receipts	\$1,000.. 3 952 066	Rental payments for machinery and equipment	\$1,000.. 28 621
Primary products value of shipments	\$1,000.. D	Lease rents	\$1,000.. 6 868
Secondary products value of shipments and receipts for services	\$1,000.. D	Expensed mineral exploration, development, land, and rights	\$1,000.. 175 238
Value of resales	\$1,000.. —		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212221, GOLD ORE MINING												
All establishments	—	301	79	17 509	777 714	15 492	32 038	674 983	2 786 188	2 304 880	3 952 066	1 139 037
Establishments with 0 to 4 employees	9	145	—	340	9 478	222	358	6 597	14 621	16 955	28 742	2 834
Establishments with 5 to 9 employees	9	50	—	344	13 073	244	479	8 232	28 913	15 534	28 391	16 091
Establishments with 10 to 19 employees	6	27	—	370	16 999	272	477	10 877	33 192	42 371	33 010	42 553
Establishments with 20 to 49 employees	4	26	26	806	29 324	631	1 153	21 064	60 124	38 659	91 396	7 387
Establishments with 50 to 99 employees	2	13	13	896	36 825	790	1 433	30 105	98 563	93 466	111 593	80 436
Establishments with 100 to 249 employees	—	25	25	4 050	174 405	3 479	6 904	143 217	553 909	337 915	801 831	89 993
Establishments with 250 to 499 employees	—	7	7	2 441	109 301	2 218	4 811	95 672	854 865	350 926	709 027	496 764
Establishments with 500 to 999 employees	—	6	6	D	D	D	D	D	D	D	D	D
Establishments with 1,000 to 2,499 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	152	—	751	22 092	544	882	15 293	60 737	25 263	79 178	6 822

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212221, GOLD ORE MINING								
All establishments	301	79	17 509	777 714	15 492	32 038	674 983	2 786 188
Producing establishments	252	74	17 085	753 842	15 211	31 464	660 942	2 774 850
Mines or wells only	8	4	1 350	55 155	1 229	2 415	50 353	481 054
Underground mines	4	1	D	D	D	D	D	D
Open-pit mines	3	2	D	D	D	D	D	D
Combination mines, well operations, or other types of mines	1	1	D	D	D	D	D	D
Mines with preparation plants	53	50	14 010	641 186	12 659	26 807	568 056	2 134 618
Underground mines	10	9	1 268	60 906	1 039	2 269	51 395	174 059
Open-pit mines	37	35	6 809	297 674	6 085	12 507	256 076	1 196 185
Combination mines or other types of mines	6	6	5 933	282 606	5 535	12 031	260 585	764 374
Separately operated preparation plants	4	3	191	8 353	161	291	6 996	15 706
Undistributed ¹	187	17	1 534	49 148	1 162	1 951	35 537	143 472
Nonproducing establishments	49	5	424	23 872	281	574	14 041	11 338

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212221	Gold ore	X	X	3 933 234	X	X	3 418 006
2122211	Crude lode gold ores	X	X	D	X	X	D
21222111	Crude lode gold ores	X	X	D	X	X	N
212221111	Crude lode gold ores mined	1,000 metric tons..	275 506.6	X	339 470.2	X	X
212221121	Crude lode gold ores and residues shipped to smelters	1,000 metric tons..	X	-	X	D	D
212221131	Crude lode gold ores and residues shipped to mills	1,000 metric tons..	X	D	D	D	D
2122213	Gold concentrates	X	X	164 483	X	X	78 988
21222131	Gold concentrates	X	X	164 483	X	X	N
2122213100	Gold concentrates	1,000 metric tons..	190.3	204.3	61.2	61.2	78 988
2122215	Gold mill bullion and placer gold	X	X	3 631 651	X	X	3 277 314
21222151	Gold mill bullion and placer gold	X	X	3 631 651	X	X	N
2122215111	Gold mill bullion, dore, and precipitates	X	X	3 607 770	X	X	3 222 395
2122215121	Placer gold	kilograms..	2 333.3	2 322.7	23 881	5 014.4	54 919
212221W	Gold ores, nsk	X	X	D	X	X	D
212221WY	Gold ores, nsk	X	X	D	X	X	N
212221WYWT	Gold ores, nsk #	X	X	D	X	X	D

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2122211	CRUDE LODGE GOLD ORES		
	United States	D	D
2122213	GOLD CONCENTRATES		
	United States	164 483	78 988
2122215	GOLD MILL BULLION AND PLACER GOLD		
	United States	3 631 651	3 277 314

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212221	GOLD ORE MINING				
	SUPPLIES CONSUMED BY TYPE				
21220001	Crude ore and residues received for concentration mil metric tons..	D	D	-	-
21220003	Crude ore and residues mined and concentrated at same establishment mil metric tons..	275.2	X	337.4	X
21222000	Material processed in placer operations mil cu meters..	1.1	X	4.7	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	592 481	X	362 055
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	285 324	X	147 123
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	174 042	X	128 311
32592001	Explosive materials (including ammonium nitrate) and blasting accessories	X	86 402	X	61 609
32621001	Tires and inner tubes	X	76 204	X	39 015
32741001	Lime (including quicklime and hydrated lime) and dead-burned dolomite	X	48 577	X	26 304
33151003	Iron and steel castings	X	24 074	X	18 130
33211101	Iron and steel forgings	X	13 453	X	18 963
33120059	Steel shapes and forms, except castings and forgings	X	38 252	X	34 938
00970098	All other supplies	X	217 780	X	196 015
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	D	X	21 199
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons..	D	D	D	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	3 654.9	103 489	2 360.0	72 305
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels..	D	D	279.5	8 437
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	D	D	D	D
32411015	Gasoline used as a fuel mil gal..	13.1	14 297	5.3	5 840
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	22 411	X	11 089
00974000	Undistributed fuels#	X	6 580	X	8 687

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class. . . .	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212221 GOLD ORE MINING

This U.S. industry comprises establishments primarily engaged in developing the mine site, mining, and/or beneficiating (i.e., preparing) ores valued chiefly for their gold content. Establishments primarily engaged in transformation of the gold into bullion or dore bar in combination with mining activities are included in this industry.

The data published with NAICS code 212221 include the following SIC industry:

1041 Gold ores

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 212221WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325WYWT	1459000	1459000
2121133	12312	12312	212291WYWT	1094000	1094000	2123911 pt.	14745 pt	14741
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14742
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14744
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911100 pt	1474500 pt	1474100
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474200
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474400
2122101	10111	10111	2122993121	1099731	1099731	2123913	14743	14743
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913111	1474301	1474301
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913121	1474303	1474303
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913YVW	14743XX	14743XX
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	212391W	14740	14740
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391WYWT	1474000	1474000
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	2123921	14751	14751
2122103131	1011207	1011207	212299WYWT pt.	1099000 pt	1099000 pt	2123921100 pt	1475100 pt	1475101
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099700	2123921100 pt	1475100 pt	1475103
212210W	10110	10110	2123110	14110	14110	2123923	14752	14752
212210WYWT	1011000	1011000	2123110111	1411011	1411011	2123923111 pt	1475202 pt	1475201
2122211	10411	10411	2123110121	1411015	1411015	2123923111 pt	1475202 pt	1475203
2122211111	1041104	1041104	2123110221	1411019	1411019	2123923111 pt	1475202 pt	1475205
2122211121	1041121	1041121	2123110YWT	1411000	1411000	2123923131	1475207	1475207
2122211131	1041123	1041123	2123120	14220	14220	2123923YVW	14752XX	14752XX
2122211YVW	10411XX	10411XX	2123120100	1422000	1422000	212392W	14750	14750
2122213	10412	10412	2123120YWT	14220XX	14220XX	212392WYWT	1475000	1475000
2122213100	1041200	1041200	2123130	14230	14230	2123931	14791	14791
2122215	10413	10413	2123130100	1423000	1423000	2123931100	1479100	1479100
2122215111	1041303	1041303	2123130YWT	14230XX	14230XX	2123933	14793	14793
2122215121	1041307	1041307	2123190 pt.	14290	14290	2123933100	1479300	1479300
2122215YVW	10413XX	10413XX	2123190 pt.	14990 pt	14990 pt	2123935	14794	14794
212221W	10410	10410	2123190 pt.	1499A pt	14992 pt	2123935100	1479400	1479400
212221WYWT	1041000	1041000	2123190111	1499A22	1499200 pt	2123939	14798	14798
2122221	10441	10441	2123190121	1429000	1429000	2123939100	1479800	1479800
2122221111	1044104	1044104	2123190YWT pt	14290XX	14290XX	212393W	14790	14790
2122221121	1044121	1044121	2123190YWT pt	1499000 pt	1499000 pt	212393WYWT	1479000	1479000
2122221131	1044123	1044123	2123211	14421	14421	2123991	14996	14996
2122221YVW	10441XX	10441XX	2123211111	1442101	1442101	2123991100	1499600	1499600
2122223	10442	10442	2123211121	1442105	1442105	2123993	14997	14997
2122223100	1044200	1044200	2123211YVW	14421XX	14421XX	2123993100 pt	1499701 pt	1499712
2122225	10443	10443	2123213	14422	14422	2123993100 pt	1499701 pt	1499722
2122225111	1044303	1044303	2123213111	1442201	1442201	2123995	14998	14998
2122225121	1044307	1044307	2123213221	1442205	1442205	2123995100 pt	1499801 pt	1499812
2122225YVW	10443XX	10443XX	2123213YVW	14422XX	14422XX	2123995100 pt	1499801 pt	1499822
212222W	10440	10440	212321W	14420	14420	2123999 pt.	1499A pt	14991
212222WYWT	1044000	1044000	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14992 pt
2122311	10311	10311	2123221	14461	14461	2123999 pt.	1499A pt	14993
2122311111	1031104	1031104	2123221100	1446100	1446100	2123999 pt.	1499A pt	14994
2122311121	1031121	1031121	2123223	14465	14465	2123999 pt.	1499A pt	14995
2122311131	1031123	1031123	2123223100	1446500	1446500	2123999 pt.	1499A pt	14995
2122311YVW	10311XX	10311XX	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122313	10312	10312	2123229100	1446900	1446900			
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Silver Ore Mining

1997

Issued December 1999

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1997 Economic Census

Mining

Industry Series



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Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212222	Silver ore mining	15	16	780	32 843	704	1 624	29 248	84 763	43 117	121 515	6 365
104400	Silver ores	N	16	780	32 843	704	1 624	29 248	84 763	43 117	121 515	6 365

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212222, SILVER ORE MINING												
United States	-	16	5	780	32 843	704	1 624	29 248	84 763	43 117	121 515	6 365

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212222, SILVER ORE MINING		212222, SILVER ORE MINING—Con.	
Companies ¹	number.. 15	Value of primary products shipments or services produced in all industries	\$1,000.. 130 309
All establishments	number.. 16	Value of primary products shipments or services produced in this industry	\$1,000.. D
Establishments with 0 to 19 employees	number.. 11	Value of primary products shipments or services produced in other industries	\$1,000.. D
Establishments with 20 to 99 employees	number.. 3	Value added by mining	\$1,000.. 84 763
Establishments with 100 employees or more	number.. 2	Total inventories, end of 1996	\$1,000.. 41 020
All employees for pay period including March 12	number.. 780	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. D
Annual payroll	\$1,000.. 32 843	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. D
Annual fringe benefits not included in payroll	\$1,000.. 11 534	Total inventories, end of 1997	\$1,000.. 41 579
Production, development, and exploration workers for pay period including March 12	number.. 704	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. D
Production, development, and exploration worker annual hours	1,000.. 1 624	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. S
Production, development, and exploration worker annual wages	\$1,000.. 29 248	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 304 693
Total cost of supplies	\$1,000.. 43 117	Capital expenditures (except land and mineral rights)	\$1,000.. 6 365
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 28 272	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. D
Cost of resales	\$1,000.. —	Capital expenditures for mineral exploration and development	\$1,000.. D
Cost of purchased fuels consumed	\$1,000.. 2 824	Capital expenditures for mineral land and rights	\$1,000.. 6
Cost of purchased electricity	\$1,000.. 6 397	Deductions from depreciable/depletable assets during year	\$1,000.. 3 448
Cost of contract work	\$1,000.. 5 624	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 307 616
Quantity of electricity purchased	1,000 kWh.. 167 511	Total depreciation/depletion charges during year	\$1,000.. 16 435
Quantity of electricity generated less sold	1,000 kWh.. —	Total rental payments during year	\$1,000.. D
Cost of purchased communications services	\$1,000.. S	Rental payments for buildings and other structures	\$1,000.. D
Total value of shipments and receipts	\$1,000.. 121 515	Rental payments for machinery and equipment	\$1,000.. D
Primary products value of shipments	\$1,000.. D	Lease rents	\$1,000.. 280
Secondary products value of shipments and receipts for services	\$1,000.. D	Expensed mineral exploration, development, land, and rights	\$1,000.. D
Value of resales	\$1,000.. —		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212222, SILVER ORE MINING												
All establishments	—	16	5	780	32 843	704	1 624	29 248	84 763	43 117	121 515	6 365
Establishments with 0 to 4 employees	1	9	—	18	420	12	17	311	994	441	1 390	45
Establishments with 5 to 9 employees	—	2	—	D	D	D	D	D	D	D	D	D
Establishments with 10 to 19 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 20 to 49 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 50 to 99 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 100 to 249 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 250 to 499 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	—	9	—	20	499	14	23	366	1 200	531	1 673	58

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212222, SILVER ORE MINING								
All establishments	16	5	780	32 843	704	1 624	29 248	84 763
Producing establishments	14	5	D	D	D	D	D	D
Mines or wells only	9	—	D	D	D	D	D	D
Underground mines	9	—	D	D	D	D	D	D
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	5	5	750	32 067	682	1 588	28 690	82 848
Underground mines	3	3	D	D	D	D	D	D
Open-pit mines	2	2	D	D	D	D	D	D
Combination mines or other types of mines	—	—	—	—	—	—	—	—
Separately operated preparation plants	—	—	—	—	—	—	—	—
Undistributed ¹	—	—	—	—	—	—	—	—
Nonproducing establishments	2	—	D	D	D	D	D	D

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212222	Silver ore	X	X	130 309	X	X	110 368
2122221	Crude silver ores	X	X	—	X	X	D
21222211	Crude silver ores	X	X	—	X	X	N
212222111	Crude silver ores mined	D	X	X	D	X	X
212222121	Crude silver ores and residues shipped to smelters	X	—	—	X	D	D
212222131	Crude silver ores and residues shipped to mills	X	—	—	X	D	D
2122223	Silver concentrates	X	X	D	X	X	D
21222231	Silver concentrates	X	X	D	X	X	N
2122223100	Silver concentrates	D	D	D	D	D	D
2122225	Silver mill bullion and placer silver	X	X	D	X	X	D
21222251	Silver mill bullion and placer silver	X	X	D	X	X	N
2122225111	Silver mill bullion, dore, and precipitates	X	X	D	X	X	D
2122225121	Placer silver	D	D	D	D	D	D
212222W	Silver ores, nsk	X	X	2 666	X	X	2 886
212222WY	Silver ores, nsk	X	X	2 666	X	X	N
212222WYWT	Silver ores, nsk #	X	X	2 666	X	X	2 886

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2122221	CRUDE SILVER ORES		
	United States	—	D
2122223	SILVER CONCENTRATES		
	United States	D	D
2122225	SILVER MILL BULLION AND PLACER SILVER		
	United States	D	D

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212222	SILVER ORE MINING				
	SUPPLIES CONSUMED BY TYPE				
2122001	Crude ore and residues received for concentration mil metric tons..	-	-	-	-
2122003	Crude ore and residues mined and concentrated at same establishment mil metric tons..	D	X	D	X
2122200	Material processed in placer operations mil cu meters..	-	X	-	-
3330007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	3 203	X	D
3330009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	6 582	X	D
3250073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	6 341	X	D
3259201	Explosive materials (including ammonium nitrate) and blasting accessories	X	2 773	X	D
3262101	Tires and inner tubes	X	D	X	D
3274101	Lime (including quicklime and hydrated lime) and dead-burned dolomite	X	1 406	X	D
3315103	Iron and steel castings	X	D	X	-
3321101	Iron and steel forgings	X	-	X	-
3312059	Steel shapes and forms, except castings and forgings	X	1 798	X	D
00970098	All other supplies	X	D	X	11 835
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	496	X	1 164
	FUELS CONSUMED BY TYPE				
2121103	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons..	-	-	-	-
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	D	D	D	D
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels..	D	D	D	D
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	D	D	D	D
32411015	Gasoline used as a fuel mil gal..	0.1	154	0.1	110
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	D	X	D
00974000	Undistributed fuels#	X	D	X	D

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212222 SILVER ORE MINING

This U.S. industry comprises establishments primarily engaged in developing the mine site, mining, and/or beneficiating (i.e., preparing) ores valued chiefly for their silver content. Establishments primarily engaged in transformation of the silver into bullion or dore bar in combination with mining activities are included in this industry.

The data published with NAICS code 212222 include the following SIC industry:

1044 Silver ores

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 212222WYWT	Includes a value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes:

1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325W	14590	14590
2121133	12312	12312	212291WYWT	1094000	1094000	212325WYWT	1459000	1459000
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14741
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14742
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14744
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474100
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474200
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474400
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913	14743	14743
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913111	1474301	1474301
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913121	1474303	1474303
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913YVW	14743XX	14743XX
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391W	14740	14740
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391WYWT	1474000	1474000
2122103131	1011207	1011207	212299WYWT pt.	1099000 pt	1099000 pt	2123921	14751	14751
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
212210W	10110	10110	2123110	14110	14110	2123921100 pt	1475100 pt	1475103
212210WYWT	1011000	1011000	2123110111	1411011	1411011	2123921100 pt	1475100 pt	1475105
2122211	10411	10411	2123110121	1411015	1411015	2123923	14752	14752
2122211111	1041104	1041104	2123110221	1411019	1411019	2123923111 pt	1475202 pt	1475201
2122211121	1041121	1041121	2123110YWT	1411000	1411000	2123923111 pt	1475202 pt	1475203
2122211131	1041123	1041123	2123120	14220	14220	2123923111 pt	1475202 pt	1475205
2122211YVW	10411XX	10411XX	2123120100	1422000	1422000	2123923131	1475207	1475207
2122213	10412	10412	2123120YWT	14220XX	14220XX	2123923YVW	14752XX	14752XX
2122213100	1041200	1041200	2123130	14230	14230	212392W	14750	14750
2122215	10413	10413	2123130100	1423000	1423000	212392WYWT	1475000	1475000
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931	14791	14791
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123931100	1479100	1479100
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933	14793	14793
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123933100	1479300	1479300
212221WYWT	1041000	1041000	2123190 pt.	1499A pt	14992 pt	2123935	14794	14794
2122221	10441	10441	2123190111	1499A22	1499200 pt	2123935100	1479400	1479400
2122221111	1044104	1044104	2123190121	1429000	1429000	2123939	14798	14798
2122221121	1044121	1044121	2123190YWT pt	14290XX	14290XX	2123939100	1479800	1479800
2122221131	1044123	1044123	2123190YWT pt	1499000 pt	1499000 pt	212393W	14790	14790
2122221YVW	10441XX	10441XX	2123211	14421	14421	212393WYWT	1479000	1479000
2122223	10442	10442	2123211111	1442101	1442101	2123991	14996	14996
2122223100	1044200	1044200	2123211121	1442105	1442105	2123991100	1499600	1499600
2122225	10443	10443	2123211YVW	14421XX	14421XX	2123993	14997	14997
2122225111	1044303	1044303	2123213	14422	14422	2123993100 pt	1499701 pt	1499712
2122225121	1044307	1044307	2123213111	1442201	1442201	2123993100 pt	1499701 pt	1499722
2122225YVW	10443XX	10443XX	2123213221	1442205	1442205	2123995	14998	14998
212222W	10440	10440	2123213YVW	14422XX	14422XX	2123995100 pt	1499801 pt	1499812
212222WYWT	1044000	1044000	212321W	14420	14420	2123995100 pt	1499801 pt	1499822
2122231	10311	10311	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14991
2122231111	1031104	1031104	2123221	14461	14461	2123999 pt.	1499A pt	14992 pt
21222311121	1031121	1031121	2123221100	1446100	1446100	2123999 pt.	1499A pt	14993
21222311131	1031123	1031123	2123223	14465	14465	2123999 pt.	1499A pt	14994
2122231YVW	10311XX	10311XX	2123223100	1446500	1446500	2123999 pt.	1499A pt	14995
21222313	10312	10312	2123229	14469	14469	2123999 pt.	1499A pt	14995
21222313111	1031201	1031201	2123229100	1446900	1446900			
21222313121	1031221	1031221						
21222313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Lead Ore and Zinc Ore Mining

1997

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212231 103100	Lead ore & zinc ore mining . . . Lead & zinc ores	20 N	34 34	2 140 2 140	89 039 89 039	1 776 1 776	3 575 3 575	67 623 67 623	416 898 416 898	225 603 225 603	532 894 532 894	109 607 109 607

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212231, LEAD ORE & ZINC ORE MINING												
United States	-	34	15	2 140	89 039	1 776	3 575	67 623	416 898	225 603	532 894	109 607

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212231, LEAD ORE & ZINC ORE MINING		212231, LEAD ORE & ZINC ORE MINING—Con.	
Companies ¹	20	Value of primary products shipments or services produced in all industries	\$1,000.. 529 680
All establishments	34	Value of primary products shipments or services produced in this industry	\$1,000.. D
Establishments with 0 to 19 employees	19	Value of primary products shipments or services produced in other industries	\$1,000.. D
Establishments with 20 to 99 employees	6	Value added by mining	\$1,000.. 416 898
Establishments with 100 employees or more	9	Total inventories, end of 1996	\$1,000.. 166 108
All employees for pay period including March 12	2 140	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. D
Annual payroll	89 039	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. D
Annual fringe benefits not included in payroll	29 892	Total inventories, end of 1997	\$1,000.. 163 392
Production, development, and exploration workers for pay period including March 12	1 776	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. D
Production, development, and exploration worker annual hours	3 575	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. D
Production, development, and exploration worker annual wages	67 623	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 1 010 245
Total cost of supplies	\$1,000.. 225 603	Capital expenditures (except land and mineral rights)	\$1,000.. 109 607
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 163 119	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 93 499
Cost of resales	\$1,000.. —	Capital expenditures for mineral exploration and development	\$1,000.. 16 108
Cost of purchased fuels consumed	\$1,000.. 9 287	Capital expenditures for mineral land and rights	\$1,000.. D
Cost of purchased electricity	\$1,000.. 19 592	Deductions from depreciable/depletable assets during year	\$1,000.. D
Cost of contract work	\$1,000.. 33 605	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 1 113 051
Quantity of electricity purchased	1,000 kWh.. 461 747	Total depreciation/depletion charges during year	\$1,000.. 54 633
Quantity of electricity generated less sold	1,000 kWh.. D	Total rental payments during year	\$1,000.. D
Cost of purchased communications services	\$1,000.. 591	Rental payments for buildings and other structures	\$1,000.. D
Total value of shipments and receipts	\$1,000.. 532 894	Rental payments for machinery and equipment	\$1,000.. D
Primary products value of shipments	\$1,000.. D	Lease rents	\$1,000.. D
Secondary products value of shipments and receipts for services	\$1,000.. D	Expensed mineral exploration, development, land, and rights	\$1,000.. 14 893
Value of resales	\$1,000.. —		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212231, LEAD ORE & ZINC ORE MINING												
All establishments	—	34	15	2 140	89 039	1 776	3 575	67 623	416 898	225 603	532 894	109 607
Establishments with 0 to 4 employees	9	11	—	22	762	12	23	318	3 990	D	1 642	D
Establishments with 5 to 9 employees	—	3	—	17	1 236	10	21	391	9 133	D	—	D
Establishments with 10 to 19 employees	1	5	—	D	D	D	D	D	D	D	D	D
Establishments with 20 to 49 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 50 to 99 employees	—	4	4	263	8 291	235	460	7 074	9 853	D	20 714	D
Establishments with 100 to 249 employees	—	7	7	1 101	39 577	952	1 703	32 613	127 586	81 715	192 610	16 691
Establishments with 250 to 499 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	8	—	30	746	22	35	517	2 049	855	2 674	230

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212231, LEAD ORE & ZINC ORE MINING								
All establishments	34	15	2 140	89 039	1 776	3 575	67 623	416 898
Producing establishments	27	15	2 096	86 992	1 755	3 539	66 787	405 464
Mines or wells only	16	4	350	10 931	302	542	8 277	32 008
Underground mines	16	4	350	10 931	302	542	8 277	32 008
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	11	11	1 746	76 061	1 453	2 997	58 510	373 456
Underground mines	9	9	D	D	D	D	D	D
Open-pit mines	1	1	D	D	D	D	D	D
Combination mines or other types of mines	1	1	D	D	D	D	D	D
Separately operated preparation plants	—	—	—	—	—	—	—	—
Undistributed ¹	—	—	—	—	—	—	—	—
Nonproducing establishments	7	—	44	2 047	21	36	836	11 434

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212231	Lead and zinc ores	X	X	529 680	X	X	496 635
2122311	Crude lead and zinc ores	X	X	47 636	X	X	D
21223111	Crude lead and zinc ores	X	X	47 636	X	X	N
2122311111	Crude lead and zinc ores mined .. mil metric tons..	13.1	X	X	13.5	X	X
2122311121	Crude lead and zinc ores and residues shipped to smelters .. mil metric tons..	X	D	D	X	—	—
2122311131	Crude lead and zinc ores and residues shipped to mills .. mil metric tons..	X	D	D	X	D	D
2122313	Lead and zinc concentrates	X	X	478 187	X	X	D
21223131	Lead and zinc concentrates	X	X	478 187	X	X	N
2122313111	Lead concentrates .. mil metric tons..	0.6	0.6	144 725	D	D	D
2122313121	Zinc concentrates .. mil metric tons..	0.9	0.9	333 462	1.0	0.9	360 928
212231W	Lead and zinc ores, nsk	X	X	3 857	X	X	1 353
212231WY	Lead and zinc ores, nsk	X	X	3 857	X	X	N
212231WYWT	Lead and zinc ores, nsk #	X	X	3 857	X	X	1 353

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2122311	CRUDE LEAD AND ZINC ORES		
	United States	47 636	D
2122313	LEAD AND ZINC CONCENTRATES		
	United States	478 187	D

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212231	LEAD ORE & ZINC ORE MINING				
	SUPPLIES CONSUMED BY TYPE				
21220001	Crude ore and residues received for concentration mil metric tons . .	D	D	D	D
21220003	Crude ore and residues mined and concentrated at same establishment mil metric tons . .	10.4	X	D	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	66 583	X	20 847
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	30 336	X	28 928
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	8 407	X	7 603
32592001	Explosive materials (including ammonium nitrate) and blasting accessories	X	8 581	X	6 901
32621001	Tires and inner tubes	X	3 563	X	2 839
32741001	Lime (including quicklime and hydrated lime) and dead-burned dolomite	X	D	X	497
33151003	Iron and steel castings	X	D	X	D
33211101	Iron and steel forgings	X	D	X	D
33120059	Steel shapes and forms, except castings and forgings	X	1 883	X	D
00970098	All other supplies	X	16 855	-	-
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	726	X	729
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons . .	D	D	D	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels . .	D	D	88.3	2 477
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels . .	D	D	-	-
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft . .	D	D	D	D
32411015	Gasoline used as a fuel mil gal . .	0.1	91	0.2	185
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	D	X	D
00974000	Undistributed fuels#	X	157	X	106

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212231 LEAD ORE AND ZINC ORE MINING

This U.S. industry comprises establishments primarily engaged in developing the mine site, mining, and/or beneficiating (i.e., preparing) lead ores, zinc ores, or lead-zinc ores.

The data published with NAICS code 212231 include the following SIC industry:

1031 Lead and zinc ores

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 212231WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14551
2121113111	1221201	1221201	2122343	10212	10212	2123240 pt.	14552 pt	14552
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455100 pt
2121113331	1221218	1221218	2122345	10213	10213	2123240111 pt	1455211 pt	1455201
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455100 pt
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240121 pt	1455212 pt	1455202
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123240YWT	1455000	1455000
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251	14591	14591
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123251100	1459100	1459100
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253	14592	14592
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459211
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123253100 pt	1459200 pt	1459221
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255	14593	14593
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123255100	1459300	1459300
2121123221	1222217	1222217	2122911	10941	10941	2123257	14596	14596
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123257100	1459600	1459600
212112W	12220	12220	2122913	10942	10942	2123258	14597	14597
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258111	1459711	1459711
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258121	1459721	1459721
2121131111	1231101	1231101	2122913121	1094205	1094205	2123258YVW	14597XX	14597XX
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259	14599	14599
2121131YVW	12311XX	12311XX	212291W	10940	10940	2123259100	1459900	1459900
2121133	12312	12312	212291WYWT	1094000	1094000	212325W	14590	14590
2121133111	1231201	1231201	212291	10992	10992	212325WYWT	1459000	1459000
2121133121	1231217	1231217	212291100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14741
2121133YVW	12312XX	12312XX	212291100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14742
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911 pt.	14745 pt	14744
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474100
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474200
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123911100 pt	1474500 pt	1474400
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913	14743	14743
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913111	1474301	1474301
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913121	1474303	1474303
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	2123913YVW	14743XX	14743XX
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391W	14740	14740
2122103131	1011207	1011207	212299W pt.	10990 pt	10997 pt	212391WYWT	1474000	1474000
2122103YVW	10112XX	10112XX	212299WYWT pt	1099000 pt	1099000 pt	2123921	14751	14751
212210W	10110	10110	212299WYWT pt	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
212210WYWT	1011000	1011000	2123110	14110	14110	2123921100 pt	1475100 pt	1475103
2122211	10411	10411	2123110111	1411011	1411011	2123923	14752	14752
2122211111	1041104	1041104	2123110121	1411015	1411015	2123923111 pt	1475202 pt	1475201
2122211121	1041121	1041121	2123110221	1411019	1411019	2123923111 pt	1475202 pt	1475203
2122211131	1041123	1041123	2123110YWT	1411000	1411000	2123923111 pt	1475202 pt	1475205
2122211YVW	10411XX	10411XX	2123120	14220	14220	2123923131	1475207	1475207
2122213	10412	10412	2123120100	1422000	1422000	2123923YVW	14752XX	14752XX
2122213100	1041200	1041200	2123120YWT	14220XX	14220XX	212392W	14750	14750
2122215	10413	10413	2123130	14230	14230	212392WYWT	1475000	1475000
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931	14791	14791
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123931100	1479100	1479100
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933	14793	14793
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123933100	1479300	1479300
212221WYWT	1041000	1041000	2123190 pt.	1499A pt	14992 pt	2123935100	1479400	1479400
2122221	10441	10441	2123190111	1499A22	1499200 pt	2123939	14798	14798
2122221111	1044104	1044104	2123190121	1429000	1429000	2123939100	1479800	1479800
2122221121	1044121	1044121	2123190YWT pt	14290XX	14290XX	212393W	14790	14790
2122221131	1044123	1044123	2123190YWT pt	1499000 pt	1499000 pt	212393WYWT	1479000	1479000
2122221YVW	10441XX	10441XX	2123211	14421	14421	2123991	14996	14996
2122223	10442	10442	2123211111	1442101	1442101	2123991100	1499600	1499600
2122223100	1044200	1044200	2123211121	1442105	1442105	2123993	14997	14997
2122225	10443	10443	2123211YVW	14421XX	14421XX	2123993100 pt	1499701 pt	1499712
2122225111	1044303	1044303	2123213	14422	14422	2123993100 pt	1499701 pt	1499722
2122225121	1044307	1044307	2123213111	1442201	1442201	2123995	14998	14998
2122225YVW	10443XX	10443XX	2123213221	1442205	1442205	2123995100 pt	1499801 pt	1499812
212222W	10440	10440	2123213YVW	14422XX	14422XX	2123999 pt.	1499A pt	14992 pt
212222WYWT	1044000	1044000	212321W	14420	14420	2123999 pt.	1499A pt	14993
2122231	10311	10311	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14994
2122231111	1031104	1031104	2123221	14461	14461	2123999 pt.	1499A pt	14995
21222311121	1031121	1031121	2123221100	1446100	1446100	2123223	14465	14465
21222311131	1031123	1031123	2123223	14465	14465	2123223100	1446500	1446500
2122231YVW	10311XX	10311XX	2123223100	1446500	1446500	2123229	14469	14469
21222313	10312	10312	2123229100	1446900	1446900	2123229100	1446900	1446900
21222313111	1031201	1031201						
21222313121	1031221	1031221						
21222313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Copper Ore and Nickel Ore Mining

1997

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212234	Copper ore & nickel ore mining	22	48	13 744	550 884	11 680	25 243	446 646	2 634 354	1 912 483	4 017 804	529 033
102100	Copper ores	N	48	13 744	550 884	11 680	25 243	446 646	2 634 354	1 912 483	4 017 804	529 033
109910	Misc metal ores, n.e.c., & ferroalloy ores, exc vanadium (pt)	N	—	—	—	—	—	—	—	—	—	—

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212234, COPPER ORE & NICKEL ORE MINING												
United States	—	48	25	13 744	550 884	11 680	25 243	446 646	2 634 354	1 912 483	4 017 804	529 033
Arizona	—	25	15	9 911	397 604	8 330	18 112	318 115	1 833 441	1 080 891	2 615 242	299 090

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212234, COPPER ORE & NICKEL ORE MINING		212234, COPPER ORE & NICKEL ORE MINING— Con.	
Companies ¹	number.. 22	Value of primary products shipments or services produced in all industries	\$1,000.. 3 860 594
All establishments	number.. 48	Value of primary products shipments or services produced in this industry	\$1,000.. D
Establishments with 0 to 19 employees	number.. 23	Value of primary products shipments or services produced in other industries	\$1,000.. D
Establishments with 20 to 99 employees	number.. 7	Value added by mining	\$1,000.. 2 634 354
Establishments with 100 employees or more	number.. 18	Total inventories, end of 1996	\$1,000.. 361 170
All employees for pay period including March 12	number.. 13 744	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 199 121
Annual payroll	\$1,000.. 550 884	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 162 049
Annual fringe benefits not included in payroll	\$1,000.. 176 169	Total inventories, end of 1997	\$1,000.. 335 886
Production, development, and exploration workers for pay period including March 12	number.. 11 680	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 181 246
Production, development, and exploration worker annual hours	1,000.. 25 243	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 154 640
Production, development, and exploration worker annual wages	\$1,000.. 446 646	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 6 213 400
Total cost of supplies	\$1,000.. 1 912 483	Capital expenditures (except land and mineral rights)	\$1,000.. 529 033
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 1 333 575	and equipment (new and used)	\$1,000.. 440 163
Cost of resales	\$1,000.. —	Capital expenditures for mineral exploration and development	\$1,000.. 88 870
Cost of purchased fuels consumed	\$1,000.. 104 424	Capital expenditures for mineral land and rights	\$1,000.. 19 377
Cost of purchased electricity	\$1,000.. 306 447	Deductions from depreciable/depletable assets during year	\$1,000.. 101 478
Cost of contract work	\$1,000.. 168 037	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 6 660 332
Quantity of electricity purchased	1,000 kWh.. 7 779 128	Total depreciation/depletion charges during year	\$1,000.. 303 698
Quantity of electricity generated less sold	1,000 kWh.. D	Total rental payments during year	\$1,000.. 22 122
Cost of purchased communications services	\$1,000.. 2 137	Rental payments for buildings and other structures	\$1,000.. 929
Total value of shipments and receipts	\$1,000.. 4 017 804	Rental payments for machinery and equipment	\$1,000.. 21 193
Primary products value of shipments	\$1,000.. D	Lease rents	\$1,000.. D
Secondary products value of shipments and receipts for services	\$1,000.. —	Expensed mineral exploration, development, land, and rights	\$1,000.. 136 130
Value of resales	\$1,000.. D		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212234, COPPER ORE & NICKEL ORE MINING												
All establishments	—	48	25	13 744	550 884	11 680	25 243	446 646	2 634 354	1 912 483	4 017 804	529 033
Establishments with 0 to 4 employees	9	8	—	21	577	13	26	398	1 587	659	2 068	178
Establishments with 5 to 9 employees	9	6	—	D	D	D	D	D	D	D	D	D
Establishments with 10 to 19 employees	9	9	—	126	5 234	99	195	4 020	8 530	5 838	3 470	10 898
Establishments with 20 to 49 employees	—	4	4	119	3 887	84	158	2 250	29 609	14 156	42 719	1 046
Establishments with 50 to 99 employees	—	3	3	215	10 363	168	375	7 176	182 493	D	216 879	D
Establishments with 100 to 249 employees	—	3	3	483	17 592	412	814	14 158	44 259	D	212 608	D
Establishments with 250 to 499 employees	—	4	4	1 594	62 691	1 299	2 770	48 500	182 998	221 490	313 861	90 627
Establishments with 500 to 999 employees	—	9	9	D	D	D	D	D	D	D	D	D
Establishments with 1,000 to 2,499 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 2,500 employees or more	—	1	1	D	D	D	D	D	D	D	D	D
Administrative records ²	9	11	—	65	2 096	47	75	1 431	5 040	2 138	6 703	475

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212234, COPPER ORE & NICKEL ORE MINING								
All establishments	48	25	13 744	550 884	11 680	25 243	446 646	2 634 354
Producing establishments	38	25	13 634	545 399	11 591	25 049	442 163	2 628 754
Mines or wells only	17	4	804	31 131	756	1 526	28 853	50 134
Underground mines	-	-	-	-	-	-	-	-
Open-pit mines	17	4	804	31 131	756	1 526	28 853	50 134
Combination mines, well operations, or other types of mines	-	-	-	-	-	-	-	-
Mines with preparation plants	18	18	11 995	481 715	10 054	21 812	384 193	2 311 118
Underground mines	-	-	-	-	-	-	-	-
Open-pit mines	11	11	7 540	288 767	6 342	14 246	232 517	1 835 159
Combination mines or other types of mines	7	7	4 455	192 948	3 712	7 566	151 676	475 959
Separately operated preparation plants	3	3	835	32 553	781	1 711	29 117	267 502
Undistributed ¹	-	-	-	-	-	-	-	-
Nonproducing establishments	10	-	110	5 485	89	194	4 483	5 600

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997		1992			
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212234	Copper and nickel ores	X	X	3 860 594	N	N	N
2122341	Crude copper-bearing ores	X	X	248 898	X	X	204 008
21223411	Crude copper-bearing ores	X	X	248 898	X	X	N
2122341111	Crude copper ores mined # mil metric tons	744.9	X	X	597.5	X	X
2122341121	Crude copper ores and residues shipped to smelters mil metric tons	X	D	D	X	-	-
2122341131	Crude copper ores and residues shipped to mills mil metric tons	X	D	D	X	74.8	204 008
2122343	Copper concentrates	X	X	2 340 840	X	X	1 982 248
21223431	Copper concentrates	X	X	2 340 840	X	X	N
2122343100	Copper concentrates mil metric tons	4.2	4.2	2 340 840	3.6	3.5	1 982 248
2122345	Copper precipitates and electrowon copper recovered from leaching operations	X	X	1 262 842	X	X	1 093 062
21223451	Copper precipitates and electrowon copper recovered from leaching operations	X	X	1 262 842	X	X	N
2122345111	Copper precipitates 1,000 metric tons	24.4	21.6	25 224	36.4	35.6	40 724
2122345121	Electrowon copper recovered from leaching operations 1,000 metric tons	581.9	579.7	1 237 618	444.5	464.5	1 052 338
212234W	Copper ores, nsk, and nickel ores and concentrates	X	X	8 014	X	X	N
212234WY	Copper ores, nsk, and nickel ores and concentrates	X	X	8 014	X	X	N
212234WYWT	Copper ores, nsk, and nickel ores and concentrates #	X	X	8 014	X	X	N

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2122341	CRUDE COPPER-BEARING ORES		
	United States	248 898	204 008
2122343	COPPER CONCENTRATES		
	United States	2 340 840	1 982 248
	Arizona	1 536 295	1 230 035
2122345	COPPER PRECIPITATES AND ELECTROWON COPPER RECOVERED FROM LEACHING OPERATIONS		
	United States	1 262 842	1 093 062

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212234	COPPER ORE & NICKEL ORE MINING				
	SUPPLIES CONSUMED BY TYPE				
21220001	Crude ore and residues received for concentration mil metric tons . .	77.7	212 140	N	N
21220003	Crude ore and residues mined and concentrated at same establishment mil metric tons . .	652.6	X	N	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	277 435	X	N
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	284 288	X	N
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	99 791	X	N
32592001	Explosive materials (including ammonium nitrate) and blasting accessories	X	52 293	X	N
32621001	Tires and inner tubes	X	74 746	X	N
32741001	Lime (including quicklime and hydrated lime) and dead-burned dolomite	X	23 778	X	N
33151003	Iron and steel castings	X	48 084	X	N
33211101	Iron and steel forgings	X	17 029	X	N
33120059	Steel shapes and forms, except castings and forgings	X	47 064	X	N
00970098	All other supplies	X	195 059	X	N
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	1 868	X	N
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons . .	-	-	N	N
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels . .	3 057.9	95 634	N	N
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels . .	D	D	N	N
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft . .	1.8	4 085	N	N
32411015	Gasoline used as a fuel mil gal . .	3.1	3 307	N	N
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	357	X	N
00974000	Undistributed fuels#	X	D	X	N

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class. . . .	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212234 COPPER ORE AND NICKEL ORE MINING

This U.S. industry comprises establishments primarily engaged in (1) developing the mine site, mining, and/or beneficiating (i.e., preparing) copper and/or nickel ores, and (2) recovering copper concentrates by the precipitation, leaching, or electrowinning of copper ore.

The data published with NAICS code 212234 include the following SIC industries:

- 1021 Copper ores
- 1099 Miscellaneous metal ores, n.e.c.
- 1061 Ferroalloy ores, except vanadium (pt)

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2122341111	Includes material for leaching
# 212234WYWT	Includes a value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes:

1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325W	14590	14590
2121133	12312	12312	212291WYWT	1094000	1094000	212325WYWT	1459000	1459000
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14741
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14742
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14744
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474100
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474200
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474400
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913	14743	14743
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913111	1474301	1474301
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913121	1474303	1474303
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913YVW	14743XX	14743XX
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391W	14740	14740
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391WYWT	1474000	1474000
2122103131	1011207	1011207	212299W pt.	1099000 pt	1099000 pt	2123921	14751	14751
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
212210W	10110	10110	212310	14110	14110	2123921100 pt	1475100 pt	1475103
212210WYWT	1011000	1011000	2123101011	1411011	1411011	2123921100 pt	1475100 pt	1475105
2122211	10411	10411	2123101021	1411015	1411015	2123923	14752	14752
2122211111	1041104	1041104	2123101021	1411019	1411019	2123923111 pt	1475202 pt	1475201
2122211121	1041121	1041121	2123101031	1411019	1411019	2123923111 pt	1475202 pt	1475203
2122211131	1041123	1041123	21231010YWT	1411000	1411000	2123923111 pt	1475202 pt	1475205
2122211YVW	10411XX	10411XX	2123120	14220	14220	2123923131	1475207	1475207
2122213	10412	10412	2123120100	1422000	1422000	2123923YVW	14752XX	14752XX
2122213100	1041200	1041200	2123120YWT	14220XX	14220XX	212392W	14750	14750
2122215	10413	10413	2123130	14230	14230	212392WYWT	1475000	1475000
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931	14791	14791
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123931100	1479100	1479100
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933	14793	14793
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123933100	1479300	1479300
212221WYWT	1041000	1041000	2123190 pt.	1499A pt	14992 pt	2123935	14794	14794
2122221	10441	10441	2123190111	1499A22	1499200 pt	2123935100	1479400	1479400
2122221111	1044104	1044104	2123190121	1429000	1429000	2123939	14798	14798
2122221121	1044121	1044121	2123190YWT pt	14290XX	14290XX	2123939100	1479800	1479800
2122221131	1044123	1044123	2123211	14421	14421	212393W	14790	14790
2122221YVW	10441XX	10441XX	2123211111	1442101	1442101	212393WYWT	1479000	1479000
2122223	10442	10442	2123211121	1442105	1442105	2123991	14996	14996
2122223100	1044200	1044200	2123211YVW	14421XX	14421XX	2123991100	1499600	1499600
2122225	10443	10443	2123213	14422	14422	2123993	14997	14997
2122225111	1044303	1044303	2123213111	1442201	1442201	2123993100 pt	1499701 pt	1499712
2122225121	1044307	1044307	2123213221	1442205	1442205	2123993100 pt	1499701 pt	1499722
2122225YVW	10443XX	10443XX	2123213YVW	14422XX	14422XX	2123995	14998	14998
212222W	10440	10440	212321W	14420	14420	2123995100 pt	1499801 pt	1499812
212222WYWT	1044000	1044000	212321WYWT	1442000	1442000	2123995100 pt	1499801 pt	1499822
2122311	10311	10311	2123221	14461	14461	2123999 pt.	1499A pt	14991
2122311111	1031104	1031104	2123221100	1446100	1446100	2123999 pt.	1499A pt	14992 pt
2122311121	1031121	1031121	2123223	14465	14465	2123999 pt.	1499A pt	14993
2122311131	1031123	1031123	2123223100	1446500	1446500	2123999 pt.	1499A pt	14994
2122311YVW	10311XX	10311XX	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122313	10312	10312	2123229100	1446900	1446900			
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Uranium-Radium-Vanadium Ore Mining

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Uranium-Radium-Vanadium Ore Mining

1997

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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division	301-457-4673
Service Sector Statistics Division	301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Com-panies ¹	All estab-lish-ments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212291	Uranium-radium-vanadium ore mining	21	29	695	26 597	513	928	16 374	90 152	73 742	103 198	60 696
109400	Uranium-radium-vanadium ores	N	29	695	26 597	513	928	16 374	90 152	73 742	103 198	60 696

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
		Total	With 20 em-ploy-ees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212291, URANIUM-RADIUM-VANADIUM ORE MINING												
United States	-	29	12	695	26 597	513	928	16 374	90 152	73 742	103 198	60 696

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212291, URANIUM-RADIUM-VANADIUM ORE MINING		212291, URANIUM-RADIUM-VANADIUM ORE MINING—Con.	
Companies ¹	21	Value of primary products shipments or services produced in all industries	\$1,000.. 85 561
All establishments	29	Value of primary products shipments or services produced in this industry	\$1,000.. 85 561
Establishments with 0 to 19 employees	17	Value of primary products shipments or services produced in other industries	\$1,000.. —
Establishments with 20 to 99 employees	11	Value added by mining	\$1,000.. 90 152
Establishments with 100 employees or more	1	Total inventories, end of 1996	\$1,000.. 34 363
All employees for pay period including March 12	695	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 29 925
Annual payroll	26 597	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 4 438
Annual fringe benefits not included in payroll	6 772	Total inventories, end of 1997	\$1,000.. 37 837
Production, development, and exploration workers for pay period including March 12	513	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 32 598
Production, development, and exploration worker annual hours	928	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 5 239
Production, development, and exploration worker annual wages	16 374	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 381 592
Total cost of supplies	73 742	Capital expenditures (except land and mineral rights)	\$1,000.. 60 696
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 41 332	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 45 543
Cost of resales	\$1,000.. D	Capital expenditures for mineral exploration and development	\$1,000.. 15 153
Cost of purchased fuels consumed	\$1,000.. 1 842	Capital expenditures for mineral land and rights	\$1,000.. D
Cost of purchased electricity	\$1,000.. 5 261	Deductions from depreciable/depletable assets during year	\$1,000.. D
Cost of contract work	\$1,000.. D	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 464 085
Quantity of electricity purchased	1,000 kWh.. 99 045	Total depreciation/depletion charges during year	\$1,000.. 28 236
Quantity of electricity generated less sold	1,000 kWh.. —	Total rental payments during year	\$1,000.. 703
Cost of purchased communications services	\$1,000.. 271	Rental payments for buildings and other structures	\$1,000.. 345
Total value of shipments and receipts	\$1,000.. 103 198	Rental payments for machinery and equipment	\$1,000.. 358
Primary products value of shipments	\$1,000.. 85 561	Lease rents	\$1,000.. 1 364
Secondary products value of shipments and receipts for services	\$1,000.. D	Expensed mineral exploration, development, land, and rights	\$1,000.. 13 979
Value of resales	\$1,000.. D		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212291, URANIUM-RADIUM-VANADIUM ORE MINING												
All establishments	—	29	12	695	26 597	513	928	16 374	90 152	73 742	103 198	60 696
Establishments with 0 to 4 employees	9	11	—	33	1 119	22	43	847	1 319	1 789	2 834	274
Establishments with 5 to 9 employees	5	4	—	D	D	D	D	D	D	D	D	D
Establishments with 10 to 19 employees	—	2	—	D	D	D	D	D	D	D	D	D
Establishments with 20 to 49 employees	—	7	7	228	8 383	182	362	6 131	5 204	27 838	24 541	8 501
Establishments with 50 to 99 employees	—	4	4	284	12 088	197	397	6 999	67 311	28 248	53 546	42 013
Establishments with 100 to 249 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	9	—	48	1 050	36	39	727	2 887	1 201	3 763	325

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212291, URANIUM-RADIUM-VANADIUM ORE MINING								
All establishments	29	12	695	26 597	513	928	16 374	90 152
Producing establishments	23	10	593	23 316	429	754	13 837	99 050
Mines or wells only	3	1	D	D	D	D	D	D
Underground mines	3	1	D	D	D	D	D	D
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	9	7	391	15 160	304	508	9 300	76 646
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines or other types of mines	9	7	391	15 160	304	508	9 300	76 646
Separately operated preparation plants	2	1	D	D	D	D	D	D
Undistributed ¹	9	1	48	1 050	36	39	727	2 887
Nonproducing establishments	6	2	102	3 281	84	174	2 537	S

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212291	Uranium-radium-vanadium ores	X	X	85 561	X	X	86 187
2122911	Crude uranium-vanadium ores	X	X	D	X	X	—
21229111	Crude uranium-vanadium ores	X	X	D	X	X	N
2122911100	Crude uranium-vanadium ores	D	D	D	D	—	—
2122913	Uranium-vanadium concentrates	X	X	73 870	X	X	45 361
21229131	Uranium-vanadium concentrates	X	X	73 870	X	X	N
2122913111	Uranium concentrates #	D	D	D	N	N	N
2122913121	Vanadium concentrates	D	D	D	D	D	D
212291W	Uranium-radium-vanadium ores, nsk	X	X	D	X	X	40 826
212291WY	Uranium-radium-vanadium ores, nsk	X	X	D	X	X	N
212291WYWT	Uranium-radium-vanadium ores, nsk #	X	X	D	X	X	40 826

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2122911	CRUDE URANIUM-VANADIUM ORES		
	United States	D	—
2122913	URANIUM-VANADIUM CONCENTRATES		
	United States	73 870	45 361

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212291	URANIUM-RADIUM-VANADIUM ORE MINING				
	SUPPLIES CONSUMED BY TYPE				
21220005	Other ores and concentrates received for treatment mil metric tons (dry basis) ..	D	D	N	2 168
21220007	Other ores and concentrates produced and treated at the same establishment mil metric tons (dry basis) ..	-	X	D	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	8 962	X	4 298
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	5 708	X	1 157
21232009	Bentonite and other clay nonmetallic minerals	X	-	X	D
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	4 931	X	4 686
32592005	Ammonium nitrate	X	D	X	D
32592013	Explosive materials (except ammonium nitrate) and blasting accessories	X	D	X	D
32621001	Tires and inner tubes	X	D	X	D
33151003	Iron and steel castings	X	-	X	-
33211101	Iron and steel forgings	X	-	X	-
33120059	Steel shapes and forms, except castings and forgings	X	D	X	D
00970098	All other supplies	X	5 896	X	N
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	3 748	X	7 800
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel1,000 s tons..	-	-	-	-
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	1.4	59	D	D
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel1,000 barrels..	-	-	D	D
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	0.3	834	0.5	1 105
32411015	Gasoline used as a fuelmil gal..	0.1	153	0.5	492
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	135	X	D
00974000	Undistributed fuels#	X	661	X	1 831

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class.	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212291 URANIUM-RADIUM-VANADIUM ORE MINING

This U.S. industry comprises establishments primarily engaged in developing the mine site, mining, and/or beneficiating (i.e., preparing) uranium-radium-vanadium ores.

The data published with NAICS code 212291 include the following SIC industry:

1094 Uranium-radium-vanadium ores

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2122913111	Byproduct uranium oxide not associated with the mining and milling of ores is included in Product Code 3251317331, Other Organic Chemicals, N.E.C.
# 212291WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14551
2121113111	1221201	1221201	2122343	10212	10212	2123240 pt.	14552 pt	14552
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455100 pt
2121113331	1221218	1221218	2122345	10213	10213	2123240111 pt	1455211 pt	1455201
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455100 pt
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240121 pt	1455212 pt	1455202
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123240YWT	1455000	1455000
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251	14591	14591
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123251100	1459100	1459100
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253	14592	14592
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459211
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123253100 pt	1459200 pt	1459221
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255	14593	14593
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123255100	1459300	1459300
2121123221	1222217	1222217	2122911	10941	10941	2123257	14596	14596
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123257100	1459600	1459600
212112W	12220	12220	2122913	10942	10942	2123258	14597	14597
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258111	1459711	1459711
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258121	1459721	1459721
2121131111	1231101	1231101	2122913121	1094205	1094205	2123258YVW	14597XX	14597XX
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259	14599	14599
2121131YVW	12311XX	12311XX	212291W	10940	10940	2123259100	1459900	1459900
2121133	12312	12312	212291WYWT	1094000	1094000	212325W	14590	14590
2121133111	1231201	1231201	212291	10992	10992	212325WYWT	1459000	1459000
2121133121	1231217	1231217	212291100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14741
2121133YVW	12312XX	12312XX	212291100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14742
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911 pt.	14745 pt	14744
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474100
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474200
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123911100 pt	1474500 pt	1474400
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913	14743	14743
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913111	1474301	1474301
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913121	1474303	1474303
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	2123913YVW	14743XX	14743XX
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391W	14740	14740
2122103131	1011207	1011207	212299W pt.	10990 pt	10997 pt	212391WYWT	1474000	1474000
2122103YVW	10112XX	10112XX	212299WYWT pt	1099000 pt	1099000 pt	2123921	14751	14751
212210W	10110	10110	212299WYWT pt	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
212210WYWT	1011000	1011000	2123110	14110	14110	2123921100 pt	1475100 pt	1475103
2122211	10411	10411	2123110111	1411011	1411011	2123923	14752	14752
2122211111	1041104	1041104	2123110121	1411015	1411015	2123923111 pt	1475202 pt	1475201
2122211121	1041121	1041121	2123110221	1411019	1411019	2123923111 pt	1475202 pt	1475203
2122211131	1041123	1041123	2123110YWT	1411000	1411000	2123923111 pt	1475202 pt	1475205
2122211YVW	10411XX	10411XX	2123120	14220	14220	2123923131	1475207	1475207
2122213	10412	10412	2123120100	1422000	1422000	2123923YVW	14752XX	14752XX
2122213100	1041200	1041200	2123120YWT	14220XX	14220XX	212392W	14750	14750
2122215	10413	10413	2123130	14230	14230	212392WYWT	1475000	1475000
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931	14791	14791
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123931100	1479100	1479100
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933	14793	14793
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123933100	1479300	1479300
212221WYWT	1041000	1041000	2123190 pt.	1499A pt	14992 pt	2123935100	1479400	1479400
2122221	10441	10441	2123190111	1499A22	1499200 pt	2123939	14798	14798
2122221111	1044104	1044104	2123190121	1429000	1429000	2123939100	1479800	1479800
2122221121	1044121	1044121	2123190YWT pt	14290XX	14290XX	212393W	14790	14790
2122221131	1044123	1044123	2123190YWT pt	1499000 pt	1499000 pt	212393WYWT	1479000	1479000
2122221YVW	10441XX	10441XX	2123211	14421	14421	2123991	14996	14996
2122223	10442	10442	2123211111	1442101	1442101	2123991100	1499600	1499600
2122223100	1044200	1044200	2123211121	1442105	1442105	2123993	14997	14997
2122225	10443	10443	2123211YVW	14421XX	14421XX	2123993100 pt	1499701 pt	1499712
2122225111	1044303	1044303	2123213	14422	14422	2123993100 pt	1499701 pt	1499722
2122225121	1044307	1044307	2123213111	1442201	1442201	2123995	14998	14998
2122225YVW	10443XX	10443XX	2123213221	1442205	1442205	2123995100 pt	1499801 pt	1499812
212222W	10440	10440	2123213YVW	14422XX	14422XX	2123999 pt.	1499A pt	14992 pt
212222WYWT	1044000	1044000	212321W	14420	14420	2123999 pt.	1499A pt	14993
2122311	10311	10311	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14994
2122311111	1031104	1031104	2123221	14461	14461	2123999 pt.	1499A pt	14995
2122311121	1031121	1031121	2123221100	1446100	1446100	2123223	14465	14465
2122311131	1031123	1031123	2123223	14465	14465	2123223100	1446500	1446500
2122311YVW	10311XX	10311XX	2123223100	1446500	1446500	2123229	14469	14469
2122313	10312	10312	2123229100	1446900	1446900			
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

All Other Metal Ore Mining

1997

Issued November 1999

EC97N-2122G

1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Com-panies ¹	All estab-lish-ments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212299 109920	All other metal ore mining . . . Misc metal ores, n.e.c., & ferroalloy ores, exc vanadium (pt)	41	42	2 711	122 508	2 174	4 961	89 445	377 573	238 898	541 816	74 655
		N	42	2 711	122 508	2 174	4 961	89 445	377 573	238 898	541 816	74 655

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
		Total	With 20 em-ploy-ees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212299, ALL OTHER METAL ORE MINING												
United States	-	42	10	2 711	122 508	2 174	4 961	89 445	377 573	238 898	541 816	74 655

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212299, ALL OTHER METAL ORE MINING		212299, ALL OTHER METAL ORE MINING—Con.	
Companies ¹	41	Value of primary products shipments or services produced in all industries	\$1,000.. 718 452
All establishments	42	Value of primary products shipments or services produced in this industry	\$1,000.. D
Establishments with 0 to 19 employees	32	Value of primary products shipments or services produced in other industries	\$1,000.. D
Establishments with 20 to 99 employees	3	Value added by mining	\$1,000.. 377 573
Establishments with 100 employees or more	7	Total inventories, end of 1996	\$1,000.. 61 713
All employees for pay period including March 12	2 711	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 44 932
Annual payroll	122 508	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 16 781
Annual fringe benefits not included in payroll	31 596	Total inventories, end of 1997	\$1,000.. 66 544
Production, development, and exploration workers for pay period including March 12	2 174	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 46 869
Production, development, and exploration worker annual hours	4 961	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 19 675
Production, development, and exploration worker annual wages	89 445	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 1 184 563
Total cost of supplies	238 898	Capital expenditures (except land and mineral rights)	\$1,000.. 74 655
Cost of supplies used, minerals received, and purchased machinery installed	165 421	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. D
Cost of resales	—	Capital expenditures for mineral exploration and development	\$1,000.. D
Cost of purchased fuels consumed	10 798	Capital expenditures for mineral land and rights	\$1,000.. D
Cost of purchased electricity	36 250	Deductions from depreciable/depletable assets during year	\$1,000.. D
Cost of contract work	26 429	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 1 247 167
Quantity of electricity purchased	810 210	Total depreciation/depletion charges during year	\$1,000.. 62 561
Quantity of electricity generated less sold	—	Total rental payments during year	\$1,000.. 5 631
Cost of purchased communications services	736	Rental payments for buildings and other structures	\$1,000.. 229
Total value of shipments and receipts	541 816	Rental payments for machinery and equipment	\$1,000.. 5 402
Primary products value of shipments	D	Lease rents	\$1,000.. D
Secondary products value of shipments and receipts for services	D	Expensed mineral exploration, development, land, and rights	\$1,000.. 2 952
Value of resales	—		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212299, ALL OTHER METAL ORE MINING												
All establishments	—	42	10	2 711	122 508	2 174	4 961	89 445	377 573	238 898	541 816	74 655
Establishments with 0 to 4 employees	7	22	—	44	733	25	37	506	2 115	1 503	3 378	240
Establishments with 5 to 9 employees	9	5	—	34	944	28	37	653	2 597	1 079	3 384	292
Establishments with 10 to 19 employees	2	5	—	64	1 825	51	75	1 334	3 218	1 959	4 966	211
Establishments with 20 to 49 employees	2	2	2	D	D	D	D	D	D	D	D	D
Establishments with 50 to 99 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 100 to 249 employees	—	3	3	614	26 985	497	1 095	20 466	118 911	62 155	168 578	12 488
Establishments with 250 to 499 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	23	—	92	1 897	68	80	1 317	5 216	2 170	6 800	586

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212299, ALL OTHER METAL ORE MINING								
All establishments	42	10	2 711	122 508	2 174	4 961	89 445	377 573
Producing establishments	39	10	2 706	122 458	2 172	4 956	89 417	377 634
Mines or wells only	-	-	-	-	-	-	-	-
Underground mines	-	-	-	-	-	-	-	-
Open-pit mines	-	-	-	-	-	-	-	-
Combination mines, well operations, or other types of mines	-	-	-	-	-	-	-	-
Mines with preparation plants	11	9	2 573	119 829	2 073	4 829	87 588	367 577
Underground mines	3	2	D	D	D	D	D	D
Open-pit mines	8	7	D	D	D	D	D	D
Combination mines or other types of mines	-	-	-	-	-	-	-	-
Separately operated preparation plants	2	1	D	D	D	D	D	D
Undistributed ¹	26	-	D	D	D	D	D	D
Nonproducing establishments	3	-	5	50	2	5	28	S

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212299	All other metal ores	X	X	718 452	X	X	N
2122991	Bauxite	X	X	D	X	X	12 099
21229911	Bauxite	X	X	D	X	X	N
2122991100	Bauxite						
	mil metric tons (dry basis) ..	D	D	D	N	N	N
2122993	Ferroalloy ores, except vanadium	X	X	D	X	X	N
21229931	Ferroalloy ores, except vanadium	X	X	D	X	X	N
2122993111	Crude ferroalloy ores, such as manganese and manganiferous ores, chromium, molybdenum, tungsten, etc. (except vanadium and nickel)						
	1,000 metric tons ..	18 553.7	D	D	N	N	N
2122993121	Molybdenum concentrates						
	1,000 metric tons cont. moly ..	50.0	48.0	421 340	50.2	50.1	208 753
2122995	Miscellaneous metal ores and concentrates, such as antimony, beryllium, mercury, rare-earth metals, tin, and titanium	X	X	267 569	X	X	142 706
21229951	Miscellaneous metal ores and concentrates, such as antimony, beryllium, mercury, rare-earth metals, tin, and titanium	X	X	267 569	X	X	N
2122995100	Miscellaneous metal ores and concentrates, such as antimony, beryllium, mercury, rare-earth metals, tin, and titanium #						
	1,000 metric tons ..	S	S	267 569	N	N	N
212299W	Other metal ores, nsk	X	X	10 797	X	X	N
212299WY	Other metal ores, nsk	X	X	10 797	X	X	N
212299WYWT	Other metal ores, nsk #	X	X	10 797	X	X	N

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2122991	BAUXITE		
	United States	D	12 099
2122993	FERROALLOY ORES, EXCEPT VANADIUM		
	United States	D	N
2122995	MISCELLANEOUS METAL ORES AND CONCENTRATES, SUCH AS ANTIMONY, BERYLLIUM, MERCURY, RARE-EARTH METALS, TIN, AND TITANIUM		
	United States	267 569	142 706

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212299	ALL OTHER METAL ORE MINING				
	SUPPLIES CONSUMED BY TYPE				
21220005	Other ores and concentrates received for treatment mil metric tons (dry basis)..	S	8 758	N	N
21220007	Other ores and concentrates produced and treated at the same establishment..... mil metric tons (dry basis)..	30.0	X	N	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	33 602	X	N
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	45 491	X	N
21232009	Bentonite and other clay nonmetallic minerals	X	-	X	N
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	21 468	X	N
32592005	Ammonium nitrate	X	4 062	X	N
32592013	Explosive materials (except ammonium nitrate) and blasting accessories	X	1 690	X	N
32621001	Tires and inner tubes	X	2 796	X	N
33151003	Iron and steel castings	X	8 390	X	N
33211101	Iron and steel forgings	X	D	X	N
33120059	Steel shapes and forms, except castings and forgings	X	D	X	N
00970098	All other supplies	X	26 789	X	N
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	2 360	X	N
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel..... 1,000 s tons..	-	-	N	N
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	123.0	4 081	N	N
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel..... 1,000 barrels..	171.2	3 899	N	N
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	0.5	1 169	N	N
32411015	Gasoline used as a fuel	0.3	423	N	N
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	666	X	N
00974000	Undistributed fuels#	X	560	X	N

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class.	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212299 ALL OTHER METAL ORE MINING

This U.S. industry comprises establishments primarily engaged in developing the mine site, mining, and/or beneficiating (i.e., preparing) metal ores (except iron and manganese ores valued for their iron content, gold ore, silver ore, copper, nickel, lead, zinc, and uranium-radium-vanadium ore).

The data published with NAICS code 212299 include the following SIC industry:

- 1099 Miscellaneous metal ores, n.e.c.
- 1061 Ferroalloy ores, except vanadium (pt)

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2122995100	Includes value for platinum-group metals.
# 212299WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325WYWT	1459000	1459000
2121133	12312	12312	212291WYWT	1094000	1094000	2123911 pt.	14745 pt	14741
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14742
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14744
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911100 pt	1474500 pt	1474100
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474200
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474400
2122101	10111	10111	2122993121	1099731	1099731	2123913	14743	14743
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913111	1474301	1474301
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913121	1474303	1474303
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913YVW	14743XX	14743XX
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	212391W	14740	14740
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391WYWT	1474000	1474000
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	2123921	14751	14751
2122103131	1011207	1011207	212299WYWT pt.	1099000 pt	1099000 pt	2123921100 pt	1475100 pt	1475101
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099700	2123921100 pt	1475100 pt	1475103
212210W	10110	10110	2123110	14110	14110	2123923	14752	14752
212210WYWT	1011000	1011000	2123110111	1411011	1411011	2123923111 pt	1475202 pt	1475201
2122211	10411	10411	2123110121	1411015	1411015	2123923111 pt	1475202 pt	1475203
2122211111	1041104	1041104	2123110221	1411019	1411019	2123923111 pt	1475202 pt	1475205
2122211121	1041121	1041121	2123110YWT	1411000	1411000	2123923131	1475207	1475207
2122211131	1041123	1041123	2123120	14220	14220	2123923YVW	14752XX	14752XX
2122211YVW	10411XX	10411XX	2123120100	1422000	1422000	212392W	14750	14750
2122213	10412	10412	2123120YWT	14220XX	14220XX	212392WYWT	1475000	1475000
2122213100	1041200	1041200	2123130	14230	14230	2123931	14791	14791
2122215	10413	10413	2123130100	1423000	1423000	2123931100	1479100	1479100
2122215111	1041303	1041303	2123130YWT	14230XX	14230XX	2123933	14793	14793
2122215121	1041307	1041307	2123190 pt.	14290	14290	2123933100	1479300	1479300
2122215YVW	10413XX	10413XX	2123190 pt.	14990 pt	14990 pt	2123935	14794	14794
212221W	10410	10410	2123190 pt.	1499A pt	14992 pt	2123935100	1479400	1479400
212221WYWT	1041000	1041000	2123190111	1499A22	1499200 pt	2123939	14798	14798
2122221	10441	10441	2123190121	1429000	1429000	2123939100	1479800	1479800
2122221111	1044104	1044104	2123190YWT pt	14290XX	14290XX	212393W	14790	14790
2122221121	1044121	1044121	2123190YWT pt	1499000 pt	1499000 pt	212393WYWT	1479000	1479000
2122221131	1044123	1044123	2123211	14421	14421	2123991	14996	14996
2122221YVW	10441XX	10441XX	2123211111	1442101	1442101	2123991100	1499600	1499600
2122223	10442	10442	2123211121	1442105	1442105	2123993	14997	14997
2122223100	1044200	1044200	2123211YVW	14421XX	14421XX	2123993100 pt	1499701 pt	1499712
2122225	10443	10443	2123213	14422	14422	2123993100 pt	1499701 pt	1499722
2122225111	1044303	1044303	2123213111	1442201	1442201	2123995	14998	14998
2122225121	1044307	1044307	2123213221	1442205	1442205	2123995100 pt	1499801 pt	1499812
2122225YVW	10443XX	10443XX	2123213YVW	14422XX	14422XX	2123995100 pt	1499801 pt	1499822
212222W	10440	10440	212321W	14420	14420	2123999	1499A	1499A
212222WYWT	1044000	1044000	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14992 pt
2122311	10311	10311	2123221	14461	14461	2123999 pt.	1499A pt	14993
2122311111	1031104	1031104	2123221100	1446100	1446100	2123999 pt.	1499A pt	14994
2122311121	1031121	1031121	2123223	14465	14465	2123999 pt.	1499A pt	14995
2122311131	1031123	1031123	2123223100	1446500	1446500	2123999 pt.	1499A pt	14995
2122311YVW	10311XX	10311XX	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122313	10312	10312	2123229100	1446900	1446900			
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Dimension Stone Mining and Quarrying

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1997 Economic Census

Mining

Industry Series



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Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212311	Dimension stone mining & quarrying	159	180	1 664	38 319	1 415	2 467	30 827	99 099	36 379	125 897	9 581
141100	Dimension stone	N	180	1 664	38 319	1 415	2 467	30 827	99 099	36 379	125 897	9 581

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212311, DIMENSION STONE MINING & QUARRYING												
United States	1	180	21	1 664	38 319	1 415	2 467	30 827	99 099	36 379	125 897	9 581
Pennsylvania	1	21	2	129	3 676	103	204	2 588	12 899	3 083	15 248	734
Texas	1	18	2	249	5 439	226	454	4 740	11 040	4 953	14 881	1 112
Wisconsin	—	8	2	120	3 810	93	195	2 785	8 699	5 861	13 211	1 349

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212311, DIMENSION STONE MINING & QUARRYING		212311, DIMENSION STONE MINING & QUARRYING—Con.	
Companies ¹	number.. 159	Value of primary products shipments or services produced in all industries	\$1,000.. 137 679
All establishments	number.. 180	Value of primary products shipments or services produced in this industry	\$1,000.. 117 907
Establishments with 0 to 19 employees	number.. 159	Value of primary products shipments or services produced in other industries	\$1,000.. 19 772
Establishments with 20 to 99 employees	number.. 20	Value added by mining	\$1,000.. 99 099
Establishments with 100 employees or more	number.. 1	Total inventories, end of 1996	\$1,000.. 19 207
All employees for pay period including March 12	number.. 1 664	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 14 444
Annual payroll	\$1,000.. 38 319	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 4 763
Annual fringe benefits not included in payroll	\$1,000.. 9 077	Total inventories, end of 1997	\$1,000.. 20 142
Production, development, and exploration workers for pay period including March 12	number.. 1 415	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 15 468
Production, development, and exploration worker annual hours	1,000.. 2 467	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 4 674
Production, development, and exploration worker annual wages	\$1,000.. 30 827	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 81 889
Total cost of supplies	\$1,000.. 36 379	Capital expenditures (except land and mineral rights)	\$1,000.. 9 581
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 18 989	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 9 050
Cost of resales	\$1,000.. 4 449	Capital expenditures for mineral exploration and development	\$1,000.. 531
Cost of purchased fuels consumed	\$1,000.. 3 767	Capital expenditures for mineral land and rights	\$1,000.. 1 120
Cost of purchased electricity	\$1,000.. 4 433	Deductions from depreciable/depletable assets during year	\$1,000.. 3 694
Cost of contract work	\$1,000.. 4 741	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 88 896
Quantity of electricity purchased	1,000 kWh.. 76 335	Total depreciation/depletion charges during year	\$1,000.. 6 074
Quantity of electricity generated less sold	1,000 kWh.. —	Total rental payments during year	\$1,000.. 2 206
Cost of purchased communications services	\$1,000.. 373	Rental payments for buildings and other structures	\$1,000.. 356
Total value of shipments and receipts	\$1,000.. 125 897	Rental payments for machinery and equipment	\$1,000.. 1 850
Primary products value of shipments	\$1,000.. 117 907	Lease rents	\$1,000.. 659
Secondary products value of shipments and receipts for services	\$1,000.. 3 525	Expensed mineral exploration, development, land, and rights	\$1,000.. 2 575
Value of resales	\$1,000.. 4 465		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212311, DIMENSION STONE MINING & QUARRYING												
All establishments	1	180	21	1 664	38 319	1 415	2 467	30 827	99 099	36 379	125 897	9 581
Establishments with 0 to 4 employees	8	97	—	244	4 518	176	260	3 498	11 293	4 981	15 155	1 119
Establishments with 5 to 9 employees	3	40	—	271	6 016	239	376	5 005	14 944	5 885	19 106	1 723
Establishments with 10 to 19 employees	—	22	—	324	6 824	279	481	5 364	16 181	6 529	20 992	1 718
Establishments with 20 to 49 employees	—	15	15	429	10 641	375	639	8 367	26 865	6 774	31 304	2 335
Establishments with 50 to 99 employees	—	5	5	D	D	D	D	D	D	D	D	D
Establishments with 100 to 249 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	78	—	209	3 637	151	205	2 768	8 618	3 870	11 609	879

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212311, DIMENSION STONE MINING & QUARRYING								
All establishments	180	21	1 664	38 319	1 415	2 467	30 827	99 099
Producing establishments	180	21	1 664	38 319	1 415	2 467	30 827	99 099
Mines or wells only	161	15	1 239	27 456	1 051	1 742	22 414	63 508
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	161	15	1 239	27 456	1 051	1 742	22 414	63 508
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	19	6	425	10 863	364	725	8 413	35 591
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	19	6	425	10 863	364	725	8 413	35 591
Combination mines or other types of mines	—	—	—	—	—	—	—	—
Separately operated preparation plants	—	—	—	—	—	—	—	—
Undistributed ¹	—	—	—	—	—	—	—	—
Nonproducing establishments	—	—	—	—	—	—	—	—

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212311	Dimension stone	X	X	137 679	X	X	107 423
2123110	Dimension stone	X	X	137 679	X	X	107 423
21231101	Rough dimension limestone	X	X	32 280	X	X	N
2123110111	Rough dimension limestone, 1,000 s tons..	390.9	383.8	32 280	X	267.3	20 224
21231102	Rough dimension granite	X	X	56 567	X	X	N
2123110221	Rough dimension granite, 1,000 s tons..	342.4	330.5	56 567	X	439.9	51 948
21231103	Other rough dimension stone (slate, marble, trap rock, sandstone, and miscellaneous stone)	X	X	30 837	X	X	N
2123110391	Other rough dimension stone (slate, marble, trap rock, sandstone, and miscellaneous stone), 1,000 s tons..	319.7	316.6	30 837	X	114.9	13 230
2123110Y	Dimension stone, nsk	X	X	17 995	X	X	N
2123110YWT	Dimension stone, nsk #	X	X	17 995	X	X	22 021

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Not applicable for this report]

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212311	DIMENSION STONE MINING & QUARRYING				
	SUPPLIES CONSUMED BY TYPE				
21231100	Rough blocks used to produce dressed stone 1,000 s tons..	6.0	209	D	D
21231005	Broken stone received for preparation (crushing, screening, washing, etc.) mil s tons..	-	-	-	-
21232001	Sand and gravel received for preparation mil s tons..	-	-	D	D
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	2 925	X	1 696
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	676	X	D
32592003	Explosive materials, except ammonium nitrate	X	259	X	605
32592005	Ammonium nitrate	X	-	X	D
32592007	Blasting accessories	X	39	X	Z
32600007	Rubber and plastics products, including tires and tubes	X	162	X	206
33120059	Steel shapes and forms, except castings and forgings	X	36	X	Z
00970098	All other supplies	X	3 477	X	3 973
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	11 206	X	7 741
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons..	-	-	-	-
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	27.5	972	12.2	365
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels..	6.0	176	D	D
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	-	16	Z	Z
32411015	Gasoline used as a fuel mil gal..	0.3	352	0.2	201
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	32	X	D
00974000	Undistributed fuels#	X	2 219	X	2 551

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class.	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212311 DIMENSION STONE MINING AND QUARRYING

This U.S. industry comprises establishments primarily engaged in developing the mine site and/or mining or quarrying dimension stone (i.e., rough blocks and/or slabs of stone).

The data published with NAICS code 212311 include the following SIC industry:

1411 Dimension stone

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2123110YWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325WYWT	1459000	1459000
2121133	12312	12312	212291WYWT	1094000	1094000	2123911 pt.	14745 pt	14741
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14742
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14744
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911100 pt	1474500 pt	1474100
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474200
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474400
2122101	10111	10111	2122993121	1099731	1099731	2123913	14743	14743
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913111	1474301	1474301
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913121	1474303	1474303
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913YVW	14743XX	14743XX
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	212391W	14740	14740
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391WYWT	1474000	1474000
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	2123921	14751	14751
2122103131	1011207	1011207	212299W pt.	10990 pt	10990 pt	2123921100 pt	1475100 pt	1475101
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099000 pt	2123921100 pt	1475100 pt	1475105
212210W	10110	10110	212299WYWT pt.	1099000 pt	1099700	2123923	14752	14752
212210WYWT	1011000	1011000	2123110	14110	14110	2123923111 pt	1475202 pt	1475201
2122211	10411	10411	2123110111	1411011	1411011	2123923111 pt	1475202 pt	1475203
2122211111	1041104	1041104	2123110121	1411015	1411015	2123923111 pt	1475202 pt	1475205
2122211121	1041121	1041121	2123110221	1411019	1411019	2123923131	1475207	1475207
2122211131	1041123	1041123	2123110YWT	1411000	1411000	2123923YVW	14752XX	14752XX
2122211YVW	10411XX	10411XX	2123120	14220	14220	212392W	14750	14750
2122213	10412	10412	2123120100	1422000	1422000	212392WYWT	1475000	1475000
2122213100	1041200	1041200	2123120YWT	14220XX	14220XX	2123931	14791	14791
2122215	10413	10413	2123130	14230	14230	2123931100	1479100	1479100
2122215111	1041303	1041303	2123130100	1423000	1423000	2123933	14793	14793
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123933100	1479300	1479300
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123935	14794	14794
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123935100	1479400	1479400
212221WYWT	1041000	1041000	2123190 pt.	14990 pt	14990 pt	2123939	14798	14798
2122221	10441	10441	2123190 pt.	14990 pt	14990 pt	2123939100	1479800	1479800
2122221111	1044104	1044104	2123211	14421	14421	212393W	14790	14790
2122221121	1044121	1044121	2123211111	1442101	1442101	212393WYWT	1479000	1479000
2122221131	1044123	1044123	2123211121	1442105	1442105	2123991	14996	14996
2122221YVW	10441XX	10441XX	2123211YVW	14421XX	14421XX	2123991100	1499600	1499600
2122223	10442	10442	2123213	14422	14422	2123993	14997	14997
2122223100	1044200	1044200	2123213111	1442201	1442201	2123993100 pt	1499701 pt	1499712
2122225	10443	10443	2123213221	1442205	1442205	2123993100 pt	1499701 pt	1499722
2122225111	1044303	1044303	2123213YVW	14422XX	14422XX	2123995	14998	14998
2122225121	1044307	1044307	212321W	14420	14420	2123995100 pt	1499801 pt	1499812
2122225YVW	10443XX	10443XX	212321WYWT	1442000	1442000	2123995100 pt	1499801 pt	1499822
212222W	10440	10440	2123221	14461	14461	2123999 pt.	1499A pt	14991
212222WYWT	1044000	1044000	2123221100	1446100	1446100	2123999 pt.	1499A pt	14992 pt
2122231	10311	10311	2123223	14465	14465	2123999 pt.	1499A pt	14993
2122231111	1031104	1031104	2123223100	1446500	1446500	2123999 pt.	1499A pt	14994
21222311121	1031121	1031121	2123229	14469	14469	2123999 pt.	1499A pt	14995
21222311131	1031123	1031123	2123229100	1446900	1446900			
2122231YVW	10311XX	10311XX						
21222313	10312	10312						
21222313111	1031201	1031201						
21222313121	1031221	1031221						
21222313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Crushed and Broken Limestone Mining and Quarrying

1997

Issued December 1999

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Com-panies ¹	All estab-lish-ments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212312	Crushed & broken limestone mining & quarrying	706	1 436	27 565	958 461	22 296	48 466	738 316	3 321 706	1 658 656	4 475 537	504 825
142200	Crushed & broken limestone	N	1 436	27 565	958 461	22 296	48 466	738 316	3 321 706	1 658 656	4 475 537	504 825

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
		Total	With 20 em-ploy-ees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212312, CRUSHED & BROKEN LIMESTONE MINING & QUARRYING												
United States	1	1 436	432	27 565	958 461	22 296	48 466	738 316	3 321 706	1 658 656	4 475 537	504 825
Alabama	-	37	18	1 303	45 169	1 091	2 465	33 942	181 101	84 182	234 180	31 103
California	-	18	4	386	17 063	290	560	12 184	48 803	24 281	65 978	7 106
Colorado	2	15	2	132	4 557	104	209	3 478	12 588	4 509	15 704	1 393
Georgia	-	23	9	534	16 702	487	1 116	14 800	68 829	28 057	90 430	6 456
Illinois	-	105	28	1 944	76 895	1 544	3 322	60 803	277 734	124 937	356 536	46 135
Indiana	1	76	22	1 375	49 932	1 149	2 684	40 040	180 835	72 493	224 635	28 693
Kansas	-	65	7	616	16 536	508	1 054	13 096	60 461	31 103	80 944	10 620
Kentucky	-	71	31	1 588	49 844	1 349	2 907	39 213	192 154	84 371	253 241	23 284
Maryland	-	11	6	365	13 425	327	658	11 477	63 776	28 812	87 666	4 922
Michigan	-	17	8	698	30 602	565	1 317	23 792	87 298	55 755	131 146	11 907
Minnesota	1	20	3	243	11 236	176	391	8 537	37 235	14 649	47 984	3 900
New York	3	58	13	943	39 316	763	1 753	29 895	116 686	65 825	163 575	18 936
North Carolina	1	16	5	215	8 802	174	426	7 341	37 023	16 514	50 012	3 525
Ohio	2	91	25	1 928	68 099	1 510	3 222	50 387	220 945	130 735	314 181	37 499
Oklahoma	-	34	17	810	21 431	715	1 418	18 220	64 908	36 409	85 762	15 555
Pennsylvania	1	112	40	2 501	93 003	1 957	4 408	66 602	300 231	127 588	391 641	36 178
South Carolina	-	11	4	152	5 387	135	361	4 746	26 866	15 961	35 903	6 924
Tennessee	1	85	28	1 473	47 303	1 195	2 739	35 936	219 740	104 906	297 605	27 041
Texas	1	50	18	1 131	38 149	969	2 245	31 656	140 461	71 921	192 277	20 105
West Virginia	1	24	13	617	15 689	448	868	11 760	48 986	34 554	68 162	15 378
Wisconsin	-	43	12	917	40 504	624	1 464	26 029	113 074	73 588	157 357	29 305

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212312, CRUSHED & BROKEN LIMESTONE MINING & QUARRYING		212312, CRUSHED & BROKEN LIMESTONE MINING & QUARRYING—Con.	
Companies ¹	706	Value of primary products shipments or services produced in all industries	\$1,000.. 4 469 528
All establishments	1 436	Value of primary products shipments or services produced in this industry	\$1,000.. 4 239 853
Establishments with 0 to 19 employees	1 004	Value of primary products shipments or services produced in other industries	\$1,000.. 229 675
Establishments with 20 to 99 employees	406	Value added by mining	\$1,000.. 3 321 706
Establishments with 100 employees or more	26	Total inventories, end of 1996	\$1,000.. 616 944
All employees for pay period including March 12	27 565	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 547 820
Annual payroll	\$1,000.. 958 461	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 69 124
Annual fringe benefits not included in payroll	\$1,000.. 245 060	Total inventories, end of 1997	\$1,000.. 611 835
Production, development, and exploration workers for pay period including March 12	number.. 22 296	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 545 026
Production, development, and exploration worker annual hours	1,000.. 48 466	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 66 809
Production, development, and exploration worker annual wages	\$1,000.. 738 316	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 5 622 217
Total cost of supplies	\$1,000.. 1 658 656	Capital expenditures (except land and mineral rights)	\$1,000.. 504 825
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 1 092 445	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 492 447
Cost of resales	\$1,000.. 33 804	Capital expenditures for mineral exploration and development	\$1,000.. 12 378
Cost of purchased fuels consumed	\$1,000.. 163 400	Capital expenditures for mineral land and rights	\$1,000.. 29 596
Cost of purchased electricity	\$1,000.. 183 568	Deductions from depreciable/depletable assets during year	\$1,000.. 158 677
Cost of contract work	\$1,000.. 185 439	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 5 997 961
Quantity of electricity purchased	1,000 kWh.. 3 156 910	Total depreciation/depletion charges during year	\$1,000.. 408 265
Quantity of electricity generated less sold	1,000 kWh.. 10 775	Total rental payments during year	\$1,000.. 74 082
Cost of purchased communications services	\$1,000.. 7 147	Rental payments for buildings and other structures	\$1,000.. 9 200
Total value of shipments and receipts	\$1,000.. 4 475 537	Rental payments for machinery and equipment	\$1,000.. 64 882
Primary products value of shipments	\$1,000.. 4 239 853	Lease rents	\$1,000.. 32 527
Secondary products value of shipments and receipts for services	\$1,000.. 200 437	Expensed mineral exploration, development, land, and rights	\$1,000.. 101 415
Value of resales	\$1,000.. 35 247		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212312, CRUSHED & BROKEN LIMESTONE MINING & QUARRYING												
All establishments	1	1 436	432	27 565	958 461	22 296	48 466	738 316	3 321 706	1 658 656	4 475 537	504 825
Establishments with 0 to 4 employees	2	323	—	652	18 401	451	879	14 178	112 960	51 756	155 335	9 381
Establishments with 5 to 9 employees	2	234	—	1 654	55 917	1 331	2 626	43 722	205 523	106 176	279 634	32 065
Establishments with 10 to 19 employees	1	447	—	6 241	204 868	5 101	10 947	160 722	721 742	363 436	966 775	118 403
Establishments with 20 to 49 employees	1	321	321	9 355	325 914	7 582	16 992	249 537	1 163 291	559 530	1 534 074	188 747
Establishments with 50 to 99 employees	1	85	85	5 868	218 173	4 609	10 379	161 620	628 758	377 618	915 511	90 865
Establishments with 100 to 249 employees	1	25	25	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	169	—	816	18 534	617	911	13 989	53 873	28 390	76 645	5 618

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212312, CRUSHED & BROKEN LIMESTONE MINING & QUARRYING								
All establishments	1 436	432	27 565	958 461	22 296	48 466	738 316	3 321 706
Producing establishments	1 405	432	27 532	957 544	22 271	48 420	737 586	3 322 019
Mines or wells only	40	3	341	9 820	263	477	7 498	36 279
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	40	3	341	9 820	263	477	7 498	36 279
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	1 330	423	26 708	932 370	21 614	47 115	718 493	3 240 374
Underground mines	20	12	580	19 907	482	1 019	15 656	74 006
Open-pit mines	1 292	399	25 282	883 358	20 411	44 680	678 249	3 069 766
Combination mines or other types of mines	18	12	846	29 105	721	1 416	24 588	96 602
Separately operated preparation plants	35	6	483	15 354	394	828	11 595	45 366
Undistributed ¹	—	—	—	—	—	—	—	—
Nonproducing establishments	31	—	33	917	25	46	730	S

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212312	Limestone	X	X	4 469 528	X	X	3 099 070
2123120	Crushed and broken limestone	X	X	4 469 528	X	X	3 099 070
21231201	Crushed and broken limestone	X	X	4 469 528	X	X	N
2123120100	Crushed and broken limestone	956.8	933.7	4 469 528	696.9	668.5	3 099 070

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Not applicable for this report]

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212312	CRUSHED & BROKEN LIMESTONE MINING & QUARRYING				
	SUPPLIES CONSUMED BY TYPE				
21231100	Rough blocks used to produce dressed stone 1,000 s tons..	D	D	18.9	801
21231005	Broken stone received for preparation (crushing, screening, washing, etc.) mil s tons..	17.7	52 402	9.4	38 475
21232001	Sand and gravel received for preparation mil s tons..	D	D	3.2	16 248
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	267 882	X	168 056
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	199 677	X	148 229
32592003	Explosive materials, except ammonium nitrate	X	81 631	X	54 318
32592005	Ammonium nitrate	X	25 439	X	17 363
32592007	Blasting accessories	X	8 996	X	8 981
32600007	Rubber and plastics products, including tires and tubes	X	30 925	X	25 424
33120059	Steel shapes and forms, except castings and forgings	X	11 416	X	15 258
00970098	All other supplies	X	154 132	X	98 664
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	246 088	X	131 451
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons..	43.0	1 569	78.5	2 427
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	2 310.6	75 758	2 143.5	65 766
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels..	308.4	8 889	202.0	6 437
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	3.6	6 595	3.2	6 923
32411015	Gasoline used as a fuel mil gal..	11.3	12 149	12.4	11 089
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	2 458	X	758
00974000	Undistributed fuels#	X	55 982	X	52 867

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class.	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212312 CRUSHED AND BROKEN LIMESTONE MINING AND QUARRYING

This U.S. industry comprises (1) establishments primarily engaged in developing the mine site, mining or quarrying crushed and broken limestone (including related rocks, such as dolomite, cement rock, marl, travertine,

and calcareous tufa), and (2) preparation plants primarily engaged in beneficiating limestone (e.g., grinding or pulverizing).

The data published with NAICS code 212312 include the following SIC industry:

1422 Crushed and broken limestone

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Tables 6a and 6b)

Not applicable.

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000.....	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000.....	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325WYWT	1459000	1459000
2121133	12312	12312	212291WYWT	1094000	1094000	2123911 pt.	14745 pt	14741
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14742
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14744
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911100 pt	1474500 pt	1474100
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474200
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474400
2122101	10111	10111	2122993121	1099731	1099731	2123913	14743	14743
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913111	1474301	1474301
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913121	1474303	1474303
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913YVW	14743XX	14743XX
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	212391W	14740	14740
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391WYWT	1474000	1474000
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	2123921	14751	14751
2122103131	1011207	1011207	212299WYWT pt.	1099000 pt	1099000 pt	2123921100 pt	1475100 pt	1475101
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099700	2123921100 pt	1475100 pt	1475103
212210W	10110	10110	2123110	14110	14110	2123923	14752	14752
212210WYWT	1011000	1011000	2123110111	1411011	1411011	2123923111 pt	1475202 pt	1475201
2122211	10411	10411	2123110121	1411015	1411015	2123923111 pt	1475202 pt	1475203
2122211111	1041104	1041104	2123110221	1411019	1411019	2123923111 pt	1475202 pt	1475205
2122211121	1041121	1041121	2123110YWT	1411000	1411000	2123923131	1475207	1475207
2122211131	1041123	1041123	2123120	14220	14220	2123923YVW	14752XX	14752XX
2122211YVW	10411XX	10411XX	2123120100	1422000	1422000	212392W	14750	14750
2122213	10412	10412	2123120YWT	14220XX	14220XX	212392WYWT	1475000	1475000
2122213100	1041200	1041200	2123130	14230	14230	2123931	14791	14791
2122215	10413	10413	2123130100	1423000	1423000	2123931100	1479100	1479100
2122215111	1041303	1041303	2123130YWT	14230XX	14230XX	2123933	14793	14793
2122215121	1041307	1041307	2123190 pt.	14290	14290	2123933100	1479300	1479300
2122215YVW	10413XX	10413XX	2123190 pt.	14990 pt	14990 pt	2123935	14794	14794
212221W	10410	10410	2123190 pt.	1499A pt	14992 pt	2123935100	1479400	1479400
212221WYWT	1041000	1041000	2123190111	1499A22	1499200 pt	2123939	14798	14798
2122221	10441	10441	2123190121	1429000	1429000	2123939100	1479800	1479800
2122221111	1044104	1044104	2123190YWT pt	14290XX	14290XX	212393W	14790	14790
2122221121	1044121	1044121	2123190YWT pt	1499000 pt	1499000 pt	212393WYWT	1479000	1479000
2122221131	1044123	1044123	2123211	14421	14421	2123991	14996	14996
2122221YVW	10441XX	10441XX	2123211111	1442101	1442101	2123991100	1499600	1499600
2122223	10442	10442	2123211121	1442105	1442105	2123993	14997	14997
2122223100	1044200	1044200	2123211YVW	14421XX	14421XX	2123993100 pt	1499701 pt	1499712
2122225	10443	10443	2123213	14422	14422	2123993100 pt	1499701 pt	1499722
2122225111	1044303	1044303	2123213111	1442201	1442201	2123995	14998	14998
2122225121	1044307	1044307	2123213221	1442205	1442205	2123995100 pt	1499801 pt	1499812
2122225YVW	10443XX	10443XX	2123213YVW	14422XX	14422XX	2123995100 pt	1499801 pt	1499822
212222W	10440	10440	212321W	14420	14420	2123999 pt.	1499A pt	14991
212222WYWT	1044000	1044000	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14992 pt
2122311	10311	10311	2123221	14461	14461	2123999 pt.	1499A pt	14993
2122311111	1031104	1031104	2123221100	1446100	1446100	2123999 pt.	1499A pt	14994
2122311121	1031121	1031121	2123223	14465	14465	2123999 pt.	1499A pt	14995
2122311131	1031123	1031123	2123223100	1446500	1446500	2123999 pt.	1499A pt	14995
2122311YVW	10311XX	10311XX	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122313	10312	10312	2123229100	1446900	1446900			
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Crushed and Broken Granite Mining and Quarrying

1997

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212313	Crushed & broken granite mining & quarrying	123	291	6 842	272 464	5 586	13 110	214 162	1 141 176	573 221	1 514 341	200 056
142300	Crushed & broken granite . . .	N	291	6 842	272 464	5 586	13 110	214 162	1 141 176	573 221	1 514 341	200 056

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	
	E ¹	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)					Annual wages (\$1,000)
212313, CRUSHED & BROKEN GRANITE MINING & QUARRYING												
United States	-	291	135	6 842	272 464	5 586	13 110	214 162	1 141 176	573 221	1 514 341	200 056
Arizona	2	10	2	113	4 034	69	120	2 297	10 936	3 337	12 151	2 122
California	1	20	4	499	23 825	399	840	18 513	94 430	41 682	128 628	7 484
Colorado	-	7	4	177	6 244	105	217	4 228	15 140	8 158	21 486	1 812
Georgia	-	55	33	1 339	49 586	1 151	2 795	41 595	237 347	130 580	335 681	32 246
New Jersey	1	7	3	427	25 274	358	741	19 469	43 472	23 829	56 945	10 356
New York	5	9	2	136	4 163	109	227	3 216	11 399	5 458	15 710	1 147
North Carolina	-	71	40	1 483	58 819	1 251	3 072	47 262	297 305	142 541	380 960	58 886
Pennsylvania	2	7	2	141	4 321	94	161	2 542	10 513	8 522	17 956	1 079
South Carolina	-	17	8	381	13 397	303	779	10 628	75 780	34 941	96 398	14 323
Virginia	-	35	19	824	31 103	673	1 662	24 218	124 665	58 229	163 128	19 766
Wisconsin	1	7	1	170	7 054	126	287	5 223	10 212	7 747	15 133	2 826

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212313, CRUSHED & BROKEN GRANITE MINING & QUARRYING		212313, CRUSHED & BROKEN GRANITE MINING & QUARRYING—Con.	
Companies ¹	123	Value of primary products shipments or services produced in all industries	\$1,000.. 1 523 851
All establishments	291	Value of primary products shipments or services produced in this industry	\$1,000.. 1 495 145
Establishments with 0 to 19 employees	156	Value of primary products shipments or services produced in other industries	\$1,000.. 28 706
Establishments with 20 to 99 employees	129	Value added by mining	\$1,000.. 1 141 176
Establishments with 100 employees or more	6	Total inventories, end of 1996	\$1,000.. 156 240
All employees for pay period including March 12	6 842	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 141 365
Annual payroll	\$1,000.. 272 464	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 14 875
Annual fringe benefits not included in payroll	\$1,000.. 71 003	Total inventories, end of 1997	\$1,000.. 168 627
Production, development, and exploration workers for pay period including March 12	number.. 5 586	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 154 427
Production, development, and exploration worker annual hours	1,000.. 13 110	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 14 200
Production, development, and exploration worker annual wages	\$1,000.. 214 162	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 2 070 883
Total cost of supplies	\$1,000.. 573 221	Capital expenditures (except land and mineral rights)	\$1,000.. 200 056
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 420 050	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 183 924
Cost of resales	\$1,000.. 4 177	Capital expenditures for mineral exploration and development	\$1,000.. 16 132
Cost of purchased fuels consumed	\$1,000.. 40 156	Capital expenditures for mineral land and rights	\$1,000.. 18 960
Cost of purchased electricity	\$1,000.. 48 146	Deductions from depreciable/depletable assets during year	\$1,000.. 84 765
Cost of contract work	\$1,000.. 60 692	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 2 205 134
Quantity of electricity purchased	1,000 kWh.. 748 736	Total depreciation/depletion charges during year	\$1,000.. 124 395
Quantity of electricity generated less sold	1,000 kWh.. 2 390	Total rental payments during year	\$1,000.. 16 984
Cost of purchased communications services	\$1,000.. 2 227	Rental payments for buildings and other structures	\$1,000.. 1 241
Total value of shipments and receipts	\$1,000.. 1 514 341	Rental payments for machinery and equipment	\$1,000.. 15 743
Primary products value of shipments	\$1,000.. 1 495 145	Lease rents	\$1,000.. 10 693
Secondary products value of shipments and receipts for services	\$1,000.. 14 776	Expensed mineral exploration, development, land, and rights	\$1,000.. 20 288
Value of resales	\$1,000.. 4 420		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212313, CRUSHED & BROKEN GRANITE MINING & QUARRYING												
All establishments	—	291	135	6 842	272 464	5 586	13 110	214 162	1 141 176	573 221	1 514 341	200 056
Establishments with 0 to 4 employees	2	43	—	119	3 312	83	141	2 617	16 723	9 541	23 298	2 966
Establishments with 5 to 9 employees	1	34	—	242	8 558	200	398	7 188	42 939	22 538	59 473	6 004
Establishments with 10 to 19 employees	1	79	—	1 185	43 450	970	2 160	35 054	163 756	97 064	231 975	28 845
Establishments with 20 to 49 employees	—	117	117	3 449	136 856	2 895	7 080	109 655	608 001	320 311	807 709	120 603
Establishments with 50 to 99 employees	—	12	12	789	28 426	587	1 349	19 164	129 688	50 331	164 015	16 004
Establishments with 100 to 249 employees	—	5	5	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	35	—	247	5 663	206	298	4 699	19 448	10 317	28 035	1 730

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212313, CRUSHED & BROKEN GRANITE MINING & QUARRYING								
All establishments	291	135	6 842	272 464	5 586	13 110	214 162	1 141 176
Producing establishments	288	135	D	D	D	D	D	D
Mines or wells only	-	-	-	-	-	-	-	-
Underground mines	-	-	-	-	-	-	-	-
Open-pit mines	-	-	-	-	-	-	-	-
Combination mines, well operations, or other types of mines	-	-	-	-	-	-	-	-
Mines with preparation plants	287	135	D	D	D	D	D	D
Underground mines	-	-	-	-	-	-	-	-
Open-pit mines	287	135	D	D	D	D	D	D
Combination mines or other types of mines	-	-	-	-	-	-	-	-
Separately operated preparation plants	1	-	D	D	D	D	D	D
Undistributed ¹	-	-	-	-	-	-	-	-
Nonproducing establishments	3	-	D	D	D	D	D	D

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212313	Granite	X	X	1 523 851	X	X	900 918
2123130	Crushed and broken granite	X	X	1 523 851	X	X	900 918
21231301	Crushed and broken granite	X	X	1 523 851	X	X	N
2123130100	Crushed and broken granite	256.0	246.7	1 523 851	175.6	172.3	900 918

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Not applicable for this report]

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212313	CRUSHED & BROKEN GRANITE MINING & QUARRYING				
	SUPPLIES CONSUMED BY TYPE				
21231100	Rough blocks used to produce dressed stone 1,000 s tons..	-	-	-	-
21231005	Broken stone received for preparation (crushing, screening, washing, etc.) mil s tons..	D	D	0.9	1 405
21232001	Sand and gravel received for preparation mil s tons..	D	D	0.2	554
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	164 804	X	40 687
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	101 298	X	59 179
32592003	Explosive materials, except ammonium nitrate	X	27 249	X	17 869
32592005	Ammonium nitrate	X	4 930	X	3 227
32592007	Blasting accessories	X	3 854	X	1 117
32600007	Rubber and plastics products, including tires and tubes	X	13 541	X	7 598
33120059	Steel shapes and forms, except castings and forgings	X	16 577	X	7 389
00970098	All other supplies	X	52 883	X	33 414
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	33 728	X	39 183
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons..	D	D	D	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	692.7	20 387	592.8	16 330
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels..	170.9	4 706	42.1	1 250
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	D	D	D	D
32411015	Gasoline used as a fuel mil gal..	1.9	1 971	2.0	2 046
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	D	X	D
00974000	Undistributed fuels#	X	6 053	X	5 646

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class. . . .	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212313 CRUSHED AND BROKEN GRANITE MINING AND QUARRYING

This U.S. industry comprises (1) establishments primarily engaged in developing the mine site, and/or mining or quarrying crushed and broken granite (including related rocks, such as gneiss, syenite, and diorite) and (2) preparation plants primarily engaged in beneficiating granite (e.g., grinding or pulverizing).

The data published with NAICS code 212313 include the following SIC industry:

1423 Crushed and broken granite

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Tables 6a and 6b)

Not applicable.

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000.....	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000.....	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes:

1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14551
2121113111	1221201	1221201	2122343	10212	10212	2123240 pt.	14552 pt	14552
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455100 pt
2121113331	1221218	1221218	2122345	10213	10213	2123240111 pt	1455211 pt	1455201
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455100 pt
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240121 pt	1455212 pt	1455202
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123240YWT	1455000	1455000
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251	14591	14591
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123251100	1459100	1459100
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253	14592	14592
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459211
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123253100 pt	1459200 pt	1459221
2121123	12222	12222	2122345YVW pt	1099733 pt	1099733 pt	2123255	14593	14593
2121123111	1222201	1222201	2122345121	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123221	1222217	1222217	2122345YVW	10941	10941	2123257	14596	14596
2121123YVW	12222XX	12222XX	212234YVW pt.	1094102	1094102	2123257100	1459600	1459600
212112W	12220	12220	2122911	10941	10941	2123258	14597	14597
212112WYWT	1222000	1222000	2122911100	1094102	1094102	2123258111	1459711	1459711
2121131	12311	12311	2122913	10942	10942	2123258111	1459711	1459711
2121131111	1231101	1231101	2122913111 pt	1094201 pt	1094201 pt	2123258121	1459721	1459721
2121131121	1231103	1231103	2122913111 pt	1094201 pt	1094201 pt	2123258YVW	14597XX	14597XX
2121131YVW	12311XX	12311XX	2122913121	1094205	1094205	2123259	14599	14599
2121133	12312	12312	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121133111	1231201	1231201	212291W	10940	10940	212325WYWT	1459000	1459000
2121133121	1231217	1231217	212291WYWT	1094000	1094000	212325WYWT	1459000	1459000
2121133YVW	12312XX	12312XX	2122991	10992	10992	2123259100 pt	1459000	1459000
212113W	12310	12310	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14741
212113WYWT	1231000	1231000	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14742
2122101	10111	10111	2122993	10997 pt	10997 pt	2123911 pt.	14745 pt	14744
2122101111	1011121	1011121	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474100
2122101121	1011123	1011123	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474200
2122101YVW	10111XX	10111XX	2122993131	1099732	1099729 pt	2123911100 pt	1474500 pt	1474400
2122103	10112	10112	2122993YVW	10997XX	10997XX	2123913	14743	14743
2122103111	1011203	1011203	2122995	10998	10998	2123913111	1474301	1474301
2122103121	1011205	1011205	2122995100 pt	1099800 pt	1099811	2123913121	1474303	1474303
2122103131	1011207	1011207	2122995100 pt	1099800 pt	1099821	2123913YVW	14743XX	14743XX
2122103YVW	10112XX	10112XX	212299W pt.	10990 pt	10990 pt	212391W	14740	14740
212210W	10110	10110	212299W pt.	10990 pt	10997 pt	212391WYWT	1474000	1474000
212210WYWT	1011000	1011000	212299WYWT pt	1099000 pt	1099000 pt	2123921	14751	14751
2122211	10411	10411	212299WYWT pt	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
2122211111	1041104	1041104	2123110	14110	14110	2123921100 pt	1475100 pt	1475103
2122211121	1041121	1041121	2123110111	1411011	1411011	2123921100 pt	1475100 pt	1475105
2122211131	1041123	1041123	2123110221	1411015	1411015	2123923	14752	14752
2122211YVW	10411XX	10411XX	2123110311	1411019	1411019	2123923111 pt	1475202 pt	1475201
2122213	10412	10412	2123110YWT	1411000	1411000	2123923111 pt	1475202 pt	1475203
2122213100	1041200	1041200	2123120	14220	14220	2123923111 pt	1475202 pt	1475205
2122215	10413	10413	2123120100	1422000	1422000	2123923131	1475207	1475207
2122215111	1041303	1041303	2123120YWT	14220XX	14220XX	2123923YVW	14752XX	14752XX
2122215121	1041307	1041307	2123130	14230	14230	212392W	14750	14750
2122215YVW	10413XX	10413XX	2123130100	1423000	1423000	212392WYWT	1475000	1475000
212221W	10410	10410	2123130YWT	14230XX	14230XX	2123931	14791	14791
212221WYWT	1041000	1041000	2123190 pt.	14290	14290	2123931100	1479100	1479100
2122221	10441	10441	2123190 pt.	14990 pt	14990 pt	2123933	14793	14793
2122221111	1044104	1044104	2123190 pt.	1499A pt	14992 pt	2123933100	1479300	1479300
2122221121	1044121	1044121	2123190111	1499A22	1499200 pt	2123935100	1479400	1479400
2122221131	1044123	1044123	2123190121	1429000	1429000	2123939	14798	14798
2122221YVW	10441XX	10441XX	2123190YWT pt	14290XX	14290XX	2123939100	1479800	1479800
2122223	10442	10442	2123190YWT pt	1499000 pt	1499000 pt	212393W	14790	14790
2122223100	1044200	1044200	2123211	14421	14421	212393WYWT	1479000	1479000
2122225	10443	10443	2123211111	1442101	1442101	2123991	14996	14996
2122225111	1044303	1044303	2123211121	1442105	1442105	2123991100	1499600	1499600
2122225121	1044307	1044307	212321YVW	14421XX	14421XX	2123993	14997	14997
2122225YVW	10443XX	10443XX	2123213	14422	14422	2123993100 pt	1499701 pt	1499712
212222W	10440	10440	2123213111	1442201	1442201	2123993100 pt	1499701 pt	1499722
212222WYWT	1044000	1044000	2123213221	1442205	1442205	2123995	14998	14998
2122231	10311	10311	2123213YVW	14422XX	14422XX	2123995100 pt	1499801 pt	1499812
2122231111	1031104	1031104	212321W	14420	14420	2123995100 pt	1499801 pt	1499822
2122231121	1031121	1031121	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14992 pt
2122231131	1031123	1031123	2123221	14461	14461	2123999 pt.	1499A pt	14993
2122231YVW	10311XX	10311XX	2123221100	1446100	1446100	2123999 pt.	1499A pt	14994
21222313	10312	10312	2123223	14465	14465	2123999 pt.	1499A pt	14995
2122231311	1031201	1031201	2123223100	1446500	1446500	2123999 pt.	1499A pt	14995
21222313121	1031221	1031221	2123229	14469	14469	2123229100	1446900	1446900
21222313YVW	10312XX	10312XX	2123229100	1446900	1446900			
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Other Crushed and Broken Stone Mining and Quarrying

1997

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1997 Economic Census

Mining

Industry Series



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Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212319	Other crushed & broken stone mining & quarrying . . .	395	462	8 036	283 736	6 014	12 191	208 761	986 599	426 383	1 279 182	134 421
142900	Crushed & broken stone, n.e.c.	N	457	7 942	281 048	5 933	12 049	206 434	972 196	422 051	1 260 997	133 871
149910	Miscellaneous nonmetallic minerals, except fuels (pt)	N	5	94	2 688	81	142	2 327	14 403	4 332	18 185	550

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	
	E ¹	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)					Annual wages (\$1,000)
212319, OTHER CRUSHED & BROKEN STONE MINING & QUARRYING												
United States	1	462	122	8 036	283 736	6 014	12 191	208 761	986 599	426 383	1 279 182	134 421
Arizona	1	18	4	253	5 575	187	361	3 906	13 407	9 135	20 574	1 968
California	—	36	14	623	24 337	500	990	19 751	80 114	27 729	101 032	6 811
Connecticut	2	14	5	250	13 985	193	430	10 065	66 664	18 209	82 296	3 050
Idaho	—	13	5	288	12 395	173	274	5 623	19 653	13 314	30 945	2 022
Massachusetts	2	17	7	433	17 637	306	670	12 554	58 530	28 577	76 058	11 049
New Jersey	2	10	6	419	19 704	301	724	12 951	76 839	29 723	99 000	7 562
New York	1	21	5	335	11 951	236	486	9 328	39 004	14 389	50 738	2 655
Oregon	1	46	9	620	20 241	398	778	13 218	50 467	26 162	68 668	7 961
Pennsylvania	1	36	10	576	19 219	427	886	14 202	74 612	30 537	92 535	12 614
Texas	5	17	5	454	10 652	367	678	8 414	38 232	17 954	50 908	5 278
Washington	—	25	7	761	26 115	548	1 084	19 002	101 453	36 397	120 743	17 107
Wisconsin	—	10	2	227	10 805	170	418	7 835	66 389	13 761	78 031	2 129

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212319, OTHER CRUSHED & BROKEN STONE MINING & QUARRYING		212319, OTHER CRUSHED & BROKEN STONE MINING & QUARRYING—Con.	
Companies ¹	395	Value of primary products shipments or services produced in all industries	\$1,000.. 1 302 987
All establishments	462	Value of primary products shipments or services produced in this industry	\$1,000.. 1 113 222
Establishments with 0 to 19 employees	340	Value of primary products shipments or services produced in other industries	\$1,000.. 189 765
Establishments with 20 to 99 employees	112	Value added by mining	\$1,000.. 986 599
Establishments with 100 employees or more	10	Total inventories, end of 1996	\$1,000.. 128 958
All employees for pay period including March 12	8 036	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 105 054
Annual payroll	\$1,000.. 283 736	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 23 904
Annual fringe benefits not included in payroll	\$1,000.. 74 790	Total inventories, end of 1997	\$1,000.. 137 016
Production, development, and exploration workers for pay period including March 12	number.. 6 014	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 111 043
Production, development, and exploration worker annual hours	1,000.. 12 191	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 25 973
Production, development, and exploration worker annual wages	\$1,000.. 208 761	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 1 511 050
Total cost of supplies	\$1,000.. 426 383	Capital expenditures (except land and mineral rights)	\$1,000.. 134 421
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 278 979	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 123 101
Cost of resales	\$1,000.. 7 401	Capital expenditures for mineral exploration and development	\$1,000.. 11 320
Cost of purchased fuels consumed	\$1,000.. 45 936	Capital expenditures for mineral land and rights	\$1,000.. 9 998
Cost of purchased electricity	\$1,000.. 45 272	Deductions from depreciable/depletable assets during year	\$1,000.. 31 903
Cost of contract work	\$1,000.. 48 795	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 1 623 566
Quantity of electricity purchased	1,000 kWh.. 722 241	Total depreciation/depletion charges during year	\$1,000.. 111 027
Quantity of electricity generated less sold	1,000 kWh.. 2 629	Total rental payments during year	\$1,000.. 40 320
Cost of purchased communications services	\$1,000.. 1 658	Rental payments for buildings and other structures	\$1,000.. 2 440
Total value of shipments and receipts	\$1,000.. 1 279 182	Rental payments for machinery and equipment	\$1,000.. 37 880
Primary products value of shipments	\$1,000.. 1 113 222	Lease rents	\$1,000.. 9 109
Secondary products value of shipments and receipts for services	\$1,000.. 158 379	Expensed mineral exploration, development, land, and rights	\$1,000.. 34 325
Value of resales	\$1,000.. 7 581		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212319, OTHER CRUSHED & BROKEN STONE MINING & QUARRYING												
All establishments	1	462	122	8 036	283 736	6 014	12 191	208 761	986 599	426 383	1 279 182	134 421
Establishments with 0 to 4 employees	6	131	—	322	7 286	206	309	5 494	27 455	13 121	36 313	4 774
Establishments with 5 to 9 employees	2	88	—	601	20 579	457	828	15 794	67 119	38 210	94 177	11 242
Establishments with 10 to 19 employees	1	121	—	1 673	55 724	1 250	2 451	42 657	172 699	82 663	229 270	26 112
Establishments with 20 to 49 employees	1	94	94	2 799	94 910	2 225	4 335	73 431	342 661	138 022	436 763	43 920
Establishments with 50 to 99 employees	2	18	18	1 235	49 751	835	1 891	33 456	146 575	71 501	200 024	18 052
Establishments with 100 to 249 employees	1	9	9	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	109	—	358	6 706	243	321	5 092	18 562	10 156	26 030	2 688

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212319, OTHER CRUSHED & BROKEN STONE MINING & QUARRYING								
All establishments	462	122	8 036	283 736	6 014	12 191	208 761	986 599
Producing establishments	456	122	8 017	283 316	6 012	12 187	208 679	985 271
Mines or wells only	14	3	178	4 817	127	199	3 756	9 789
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	14	3	178	4 817	127	199	3 756	9 789
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	426	115	7 604	270 968	5 719	11 627	199 624	958 881
Underground mines	3	2	D	D	D	D	D	D
Open-pit mines	422	112	D	D	D	D	D	D
Combination mines or other types of mines	1	1	D	D	D	D	D	D
Separately operated preparation plants	16	4	235	7 531	166	361	5 299	16 601
Undistributed ¹	—	—	—	—	—	—	—	—
Nonproducing establishments	6	—	19	420	2	4	82	1 328

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212319	Other stone	X	X	1 302 987	X	X	N
2123190	Bituminous limestone, bituminous sandstone, and other crushed and broken stone	X	X	1 302 987	X	X	N
21231901	Bituminous limestone, bituminous sandstone, and other crushed and broken stone	X	X	1 304 886	X	X	N
2123190111	Bituminous limestone and bituminous sandstone	2 954.1	2 904.4	18 108	N	N	N
2123190121	Other crushed and broken stone	228.0	214.1	1 286 778	161.8	159.6	950 806
2123190Y	Bituminous limestone, bituminous sandstone, and other crushed and broken stone, nsk	X	X	1 899	X	X	N
2123190YWT	Bituminous limestone, bituminous sandstone, and other crushed and broken stone, nsk #	X	X	1 899	X	X	N

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Not applicable for this report]

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212319	OTHER CRUSHED & BROKEN STONE MINING & QUARRYING				
	SUPPLIES CONSUMED BY TYPE				
21231100	Rough blocks used to produce dressed stone 1,000 s tons..	—	—	N	N
21231005	Broken stone received for preparation (crushing, screening, washing, etc.) mil s tons..	3.4	11 580	N	N
21232001	Sand and gravel received for preparation mil s tons..	3.1	8 723	N	N
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	47 013	X	N
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	52 560	X	N
32592003	Explosive materials, except ammonium nitrate	X	8 590	X	N
32592005	Ammonium nitrate	X	5 826	X	N
32592007	Blasting accessories	X	1 921	X	N
32600007	Rubber and plastics products, including tires and tubes	X	5 887	X	N
33120059	Steel shapes and forms, except castings and forgings	X	5 602	X	N
00970098	All other supplies	X	34 049	X	N
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	97 228	X	N
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons..	—	—	N	N
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	468.4	15 887	N	N
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels..	60.3	1 685	N	N
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	1.8	5 851	N	N
32411015	Gasoline used as a fuel mil gal..	1.5	1 583	N	N
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	174	X	N
00974000	Undistributed fuels#	X	20 756	X	N

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212319 OTHER CRUSHED AND BROKEN STONE MINING AND QUARRYING

This U.S. industry comprises (1) establishments primarily engaged in developing the mine site and/or mining or quarrying crushed and broken stone (except limestone and granite), (2) preparation plants primarily engaged in beneficiating (e.g., grinding and pulverizing) stone (except

limestone and granite), and (3) establishments primarily engaged in mining or quarrying bituminous limestone and bituminous sandstone.

The data published with NAICS code 212319 include the following SIC industries:

1429 Crushed and broken stone, n.e.c.

1499 Miscellaneous nonmetallic minerals, except fuels (pt)

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2123190YWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325W	14590	14590
2121133	12312	12312	212291WYWT	1094000	1094000	212325WYWT	1459000	1459000
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14741
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14742
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14744
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474100
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474200
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474400
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913	14743	14743
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913111	1474301	1474301
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913121	1474303	1474303
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913YVW	14743XX	14743XX
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391W	14740	14740
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391WYWT	1474000	1474000
2122103131	1011207	1011207	212299WYWT pt.	1099000 pt	1099000 pt	2123921	14751	14751
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
212210W	10110	10110	2123110	14110	14110	2123921100 pt	1475100 pt	1475103
212210WYWT	1011000	1011000	2123110111	1411011	1411011	2123923	14752	14752
2122211	10411	10411	2123110121	1411015	1411015	2123923111 pt	1475202 pt	1475201
2122211111	1041104	1041104	2123110221	1411019	1411019	2123923111 pt	1475202 pt	1475203
2122211121	1041121	1041121	2123110YWT	1411000	1411000	2123923111 pt	1475202 pt	1475205
2122211131	1041123	1041123	2123120	14220	14220	2123923131	1475207	1475207
2122211YVW	10411XX	10411XX	2123120100	1422000	1422000	2123923YVW	14752XX	14752XX
2122213	10412	10412	2123120YWT	14220XX	14220XX	212392W	14750	14750
2122213100	1041200	1041200	2123130	14230	14230	212392WYWT	1475000	1475000
2122215	10413	10413	2123130100	1423000	1423000	2123931	14791	14791
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931100	1479100	1479100
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123933	14793	14793
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933100	1479300	1479300
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123935	14794	14794
212221WYWT	1041000	1041000	2123190 pt.	1499A pt	14992 pt	2123935100	1479400	1479400
2122221	10441	10441	2123190111	1499A22	1499200 pt	2123939	14798	14798
2122221111	1044104	1044104	2123190121	1429000	1429000	2123939100	1479800	1479800
2122221121	1044121	1044121	2123190YWT pt	14290XX	14290XX	212393W	14790	14790
2122221131	1044123	1044123	2123190YWT pt	1499000 pt	1499000 pt	212393WYWT	1479000	1479000
2122221YVW	10441XX	10441XX	2123211	14421	14421	2123991	14996	14996
2122223	10442	10442	2123211111	1442101	1442101	2123991100	1499600	1499600
2122223100	1044200	1044200	2123211121	1442105	1442105	2123993	14997	14997
2122225	10443	10443	2123211YVW	14421XX	14421XX	2123993100 pt	1499701 pt	1499712
2122225111	1044303	1044303	2123213	14422	14422	2123993100 pt	1499701 pt	1499722
2122225121	1044307	1044307	2123213111	1442201	1442201	2123995	14998	14998
2122225YVW	10443XX	10443XX	2123213221	1442205	1442205	2123995100 pt	1499801 pt	1499812
212222W	10440	10440	2123213YVW	14422XX	14422XX	2123999	14999	14999
212222WYWT	1044000	1044000	212321W	14420	14420	2123999100	1499900	1499900
2122231	10311	10311	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14992 pt
2122231111	1031104	1031104	2123221	14461	14461	2123999 pt.	1499A pt	14993
21222311121	1031121	1031121	2123221100	1446100	1446100	2123999 pt.	1499A pt	14994
21222311131	1031123	1031123	2123223	14465	14465	2123999 pt.	1499A pt	14995
2122231YVW	10311XX	10311XX	2123223100	1446500	1446500	212321W	14420	14420
21222313	10312	10312	2123229	14469	14469	212321WYWT	1442000	1442000
21222313111	1031201	1031201	2123229100	1446900	1446900	2123221	14461	14461
21222313121	1031221	1031221				2123221100	1446100	1446100
21222313YVW	10312XX	10312XX				2123223	14465	14465
212231W	10310	10310				2123223100	1446500	1446500
212231WYWT	1031000	1031000				2123229	14469	14469
						2123229100	1446900	1446900

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Construction Sand and Gravel Mining

1997

Issued December 1999

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212321	Construction sand & gravel mining	1 876	2 368	26 913	908 382	20 010	40 434	679 673	2 658 693	1 208 083	3 497 651	370 460
144200	Construction sand & gravel	N	2 368	26 913	908 382	20 010	40 434	679 673	2 658 693	1 208 083	3 497 651	370 460

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	
	E ¹	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)					Annual wages (\$1,000)
212321, CONSTRUCTION SAND & GRAVEL MINING												
United States	2	2 368	363	26 913	908 382	20 010	40 434	679 673	2 658 693	1 208 083	3 497 651	370 460
Alabama	3	38	5	438	10 647	344	620	8 529	32 157	16 074	43 965	4 266
Arkansas	1	36	8	402	10 567	325	651	8 657	31 463	16 357	42 477	5 343
California	2	151	45	2 602	114 205	2 069	4 511	92 838	418 700	142 073	522 396	38 472
Connecticut	2	36	3	272	9 122	192	382	6 275	24 326	8 954	30 880	2 518
Florida	3	53	10	767	22 516	556	1 158	18 021	76 934	38 436	102 309	13 061
Georgia	4	21	2	190	5 461	152	277	4 244	15 161	6 580	20 057	1 727
Illinois	3	91	11	1 101	45 926	696	1 581	26 961	127 922	47 826	157 597	18 151
Iowa	1	61	4	358	10 911	313	589	9 688	37 292	11 595	46 101	2 786
Kentucky	1	16	3	247	8 372	201	459	6 603	32 022	14 969	42 488	4 503
Louisiana	2	53	8	528	12 407	422	716	9 940	41 723	19 318	54 344	6 697
Massachusetts	3	47	7	511	18 927	321	630	11 396	41 289	23 567	58 284	6 572
Michigan	2	125	7	967	36 756	705	1 541	28 619	114 929	58 851	153 060	20 720
Mississippi	2	44	7	551	12 121	427	735	9 295	30 600	17 129	45 451	2 278
Missouri	3	47	5	402	11 614	303	534	8 213	27 781	13 311	36 047	5 045
Nebraska	2	54	2	352	8 570	275	390	6 154	24 093	11 235	31 322	4 006
Nevada	2	28	4	322	9 154	211	384	6 327	29 851	12 180	37 772	4 259
New Hampshire	2	28	6	370	16 828	271	618	12 280	38 111	28 586	63 120	4 472
New Jersey	1	38	9	494	20 836	321	690	13 261	71 878	23 481	84 304	11 055
New Mexico	5	16	2	284	7 691	223	369	6 084	17 614	8 541	23 962	2 193
New York	3	145	13	1 155	42 730	828	1 670	30 822	117 136	46 555	148 221	15 470
North Carolina	1	42	7	523	13 311	414	812	10 821	33 621	16 987	43 051	7 557
North Dakota	8	17	6	473	21 151	362	809	16 824	51 693	24 499	69 490	6 702
Ohio	2	153	26	1 693	55 971	1 295	2 588	41 957	161 964	73 009	210 439	24 534
Oklahoma	2	41	8	415	9 182	327	594	7 631	30 737	12 134	36 506	6 365
Pennsylvania	4	86	11	883	28 537	674	1 173	22 309	74 036	33 626	100 149	7 513
South Carolina	2	21	4	263	7 332	195	409	5 581	20 029	8 843	26 572	2 300
Tennessee	1	29	9	587	16 503	450	856	11 596	51 268	28 075	68 397	10 946
Texas	3	154	39	2 426	67 745	1 943	3 837	54 806	197 455	95 387	264 464	28 485
Virginia	-	32	3	344	10 945	260	532	8 619	37 046	16 377	46 220	7 203
Washington	1	55	9	636	23 268	441	925	15 861	60 809	40 575	97 079	4 305
Wisconsin	1	63	6	572	19 951	372	784	14 366	53 855	23 957	64 267	13 545

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212321, CONSTRUCTION SAND & GRAVEL MINING		212321, CONSTRUCTION SAND & GRAVEL MINING—Con.	
Companies ¹ number..	1 876	Value of primary products shipments or services produced in all industries..... \$1,000..	3 789 045
All establishments number..	2 368	Value of primary products shipments or services produced in this industry..... \$1,000..	3 261 015
Establishments with 0 to 19 employees..... number..	2 005	Value of primary products shipments or services produced in other industries..... \$1,000..	528 030
Establishments with 20 to 99 employees..... number..	349	Value added by mining..... \$1,000..	2 658 693
Establishments with 100 employees or more..... number..	14	Total inventories, end of 1996..... \$1,000..	547 873
All employees for pay period including March 12..... number..	26 913	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996..... \$1,000..	487 348
Annual payroll..... \$1,000..	908 382	Supplies, parts, fuels, etc., inventories, end of 1996..... \$1,000..	60 525
Annual fringe benefits not included in payroll..... \$1,000..	237 429	Total inventories, end of 1997..... \$1,000..	554 371
Production, development, and exploration workers for pay period including March 12..... number..	20 010	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997..... \$1,000..	495 136
Production, development, and exploration worker annual hours..... 1,000..	40 434	Supplies, parts, fuels, etc., inventories, end of 1997..... \$1,000..	59 235
Production, development, and exploration worker annual wages..... \$1,000..	679 673	Gross book value of depreciable/depletable assets at beginning of year..... \$1,000..	4 077 465
Total cost of supplies..... \$1,000..	1 208 083	Capital expenditures (except land and mineral rights)..... \$1,000..	370 460
Cost of supplies used, minerals received, and purchased machinery installed..... \$1,000..	745 100	Capital expenditures for buildings, structures, machinery, and equipment (new and used)..... \$1,000..	358 187
Cost of resales..... \$1,000..	37 821	Capital expenditures for mineral exploration and development..... \$1,000..	12 273
Cost of purchased fuels consumed..... \$1,000..	167 912	Capital expenditures for mineral land and rights..... \$1,000..	53 600
Cost of purchased electricity..... \$1,000..	161 359	Deductions from depreciable/depletable assets during year..... \$1,000..	169 332
Cost of contract work..... \$1,000..	95 891	Gross book value of depreciable/depletable assets at end of year..... \$1,000..	4 332 193
Quantity of electricity purchased..... 1,000 kWh..	2 525 053	Total depreciation/depletion charges during year..... \$1,000..	318 060
Quantity of electricity generated less sold..... 1,000 kWh..	3 049	Total rental payments during year..... \$1,000..	100 648
Cost of purchased communications services..... \$1,000..	4 434	Rental payments for buildings and other structures..... \$1,000..	14 306
Total value of shipments and receipts..... \$1,000..	3 497 651	Rental payments for machinery and equipment..... \$1,000..	86 342
Primary products value of shipments..... \$1,000..	3 261 015	Lease rents..... \$1,000..	26 623
Secondary products value of shipments and receipts for services..... \$1,000..	196 085	Expensed mineral exploration, development, land, and rights..... \$1,000..	170 313
Value of resales..... \$1,000..	40 551		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212321, CONSTRUCTION SAND & GRAVEL MINING												
All establishments.....	2	2 368	363	26 913	908 382	20 010	40 434	679 673	2 658 693	1 208 083	3 497 651	370 460
Establishments with 0 to 4 employees.....	5	958	—	2 394	56 233	1 587	2 647	44 874	171 326	83 767	230 434	24 702
Establishments with 5 to 9 employees.....	2	563	—	3 798	120 882	2 882	5 522	95 030	401 087	166 657	511 539	56 484
Establishments with 10 to 19 employees.....	2	484	—	6 623	223 590	4 942	9 939	171 090	672 716	300 164	870 801	102 197
Establishments with 20 to 49 employees.....	2	296	296	8 760	303 628	6 669	13 731	222 746	860 413	405 866	1 146 691	119 588
Establishments with 50 to 99 employees.....	4	53	53	3 393	127 874	2 395	5 269	91 099	342 321	155 935	464 087	35 064
Establishments with 100 to 249 employees.....	3	13	13	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees.....	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees.....	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees.....	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more.....	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	692	—	2 095	38 870	1 415	1 991	30 651	96 845	46 054	132 063	10 836

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212321, CONSTRUCTION SAND & GRAVEL MINING								
All establishments	2 368	363	26 913	908 382	20 010	40 434	679 673	2 658 693
Producing establishments	2 334	361	26 725	902 726	19 881	40 355	676 257	2 659 394
Mines or wells only	120	9	1 115	32 120	826	1 387	24 178	80 964
Underground mines	1	—	D	D	D	D	D	D
Open-pit mines	116	9	D	D	D	D	D	D
Combination mines, well operations, or other types of mines	3	—	D	D	D	D	D	D
Mines with preparation plants	956	210	14 037	498 662	10 388	22 099	369 347	1 633 950
Underground mines	2	1	D	D	D	D	D	D
Open-pit mines	903	190	12 985	459 190	9 588	20 409	341 824	1 486 511
Combination mines or other types of mines	51	19	D	D	D	D	D	D
Separately operated preparation plants	21	4	305	10 279	130	274	3 702	21 941
Undistributed ¹	1 237	138	11 268	361 665	8 537	16 595	279 030	922 539
Nonproducing establishments	34	2	188	5 656	129	79	3 416	S

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212321	Construction sand and gravel	X	X	3 789 045	X	X	2 998 264
2123211	Construction sand and gravel (run of pit or bank)	X	X	350 479	X	X	229 642
21232111	Construction sand and gravel (run of pit or bank)	X	X	350 479	X	X	N
2123211111	Construction sand (run of pit or bank)	51.3	48.0	170 391	45.7	44.4	115 280
2123211121	Construction gravel (run of pit or bank)	53.5	48.1	180 088	40.4	39.5	114 362
2123213	Construction sand and gravel (washed, screened, or otherwise treated)	X	X	1 957 762	X	X	1 650 664
21232131	Construction sand (washed, screened, or otherwise treated)	X	X	937 208	X	X	N
2123213111	Construction sand (washed, screened, or otherwise treated)	225.8	215.9	937 208	198.6	194.5	755 233
21232132	Construction gravel (washed, screened, or otherwise treated)	X	X	1 020 554	X	X	N
2123213221	Construction gravel (washed, screened, or otherwise treated)	203.5	195.7	1 020 554	212.3	204.4	895 431
212321W	Construction sand and gravel, nsk #	X	X	1 480 804	X	X	1 117 958
212321WY	Construction sand and gravel, nsk	X	X	1 480 804	X	X	N
212321WYWT	Construction sand and gravel, nsk #	X	X	1 480 804	X	X	1 117 958

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2123211	CONSTRUCTION SAND AND GRAVEL (RUN OF PIT OR BANK)		
	United States	350 479	229 642
	Arkansas	4 579	2 628
	California	74 269	31 941
	Connecticut	2 011	2 179
	Florida	5 212	5 640
	Illinois	11 899	5 569
	Louisiana	4 113	N
	Massachusetts	10 904	6 002
	Michigan	16 359	9 351
	Mississippi	2 331	4 109
	Missouri	7 684	3 449
	Nebraska	14 366	N
	Nevada	7 338	N
	New Hampshire	2 240	N
	New Jersey	4 465	6 890
	New York	13 793	17 727
	Ohio	24 754	13 314
	Oklahoma	2 257	N
	Pennsylvania	4 924	5 712
	South Carolina	4 349	N
Tennessee	4 877	N	
Texas	27 072	15 683	
Virginia	3 779	N	
Washington	17 696	18 850	
Wisconsin	9 467	11 626	
2123213	CONSTRUCTION SAND AND GRAVEL (WASHED, SCREENED, OR OTHERWISE TREATED)		
	United States	1 957 762	1 650 664
	Alabama	28 548	26 147
	Arkansas	31 777	21 521
	California	272 317	286 663
	Connecticut	9 162	8 639
	Florida	54 397	62 919
	Georgia	9 858	9 598
	Illinois	77 114	83 650
	Iowa	41 584	30 859
	Louisiana	31 190	32 701
	Massachusetts	18 053	28 269
	Michigan	91 535	76 065
	Mississippi	32 580	27 382
	Missouri	19 110	15 948
	Nebraska	8 323	21 697
	Nevada	21 085	11 314
	New Hampshire	40 236	15 187
	New Jersey	65 540	49 310
	New Mexico	10 803	8 398
	New York	74 193	61 545
North Carolina	35 456	26 160	
North Dakota	5 304	5 785	
Ohio	117 726	120 905	
Oklahoma	24 679	9 717	
Pennsylvania	46 453	64 525	
South Carolina	20 213	20 100	
Tennessee	48 833	23 883	
Texas	106 977	94 611	
Virginia	43 185	24 808	
Washington	71 799	38 259	
Wisconsin	55 867	25 922	

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212321	CONSTRUCTION SAND & GRAVEL MINING				
	SUPPLIES CONSUMED BY TYPE				
21231100	Rough blocks used to produce dressed stone 1,000 s tons..	-	-	-	-
21231005	Broken stone received for preparation (crushing, screening, washing, etc.) mil s tons..	4.0	7 521	1.8	5 295
21232001	Sand and gravel received for preparation mil s tons..	29.4	73 467	24.3	57 069
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	133 049	X	97 918
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	102 407	X	82 253
32592003	Explosive materials, except ammonium nitrate	X	2 306	X	2 135
32592005	Ammonium nitrate	X	339	X	134
32592007	Blasting accessories	X	242	X	310
32600007	Rubber and plastics products, including tires and tubes	X	7 947	X	5 326
33120059	Steel shapes and forms, except castings and forgings	X	6 945	X	6 402
00970098	All other supplies	X	59 366	X	62 442
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	351 511	X	251 042
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons..	D	D	D	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	1 403.8	48 795	1 138.8	36 205
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels..	315.1	9 652	180.8	6 228
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	1.4	3 759	0.7	1 670
32411015	Gasoline used as a fuel mil gal..	5.7	6 044	5.1	5 026
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	D	X	D
00974000	Undistributed fuels#	X	98 520	X	77 013

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212321 CONSTRUCTION SAND AND GRAVEL MINING

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) operating commercial grade (i.e., construction) sand and gravel pits; (2) dredging for commercial grade sand and gravel; and (3) washing, screening, or otherwise preparing commercial grade sand and gravel.

The data published with NAICS code 212321 include the following SIC industry:

1442 Construction sand and gravel

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 212321W	Includes construction sand and gravel shipped by establishments classified in manufacturing industries.
# 212321WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325WYWT	1459000	1459000
2121133	12312	12312	212291WYWT	1094000	1094000	2123911 pt.	14745 pt	14741
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14742
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14744
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911100 pt	1474500 pt	1474100
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474200
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474400
2122101	10111	10111	2122993121	1099731	1099731	2123913	14743	14743
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913111	1474301	1474301
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913121	1474303	1474303
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913YVW	14743XX	14743XX
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	212391W	14740	14740
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391WYWT	1474000	1474000
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	2123921	14751	14751
2122103131	1011207	1011207	212299W pt.	10990 pt	10990 pt	2123921100 pt	1475100 pt	1475101
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099000 pt	2123921100 pt	1475100 pt	1475105
212210W	10110	10110	212299WYWT pt.	1099000 pt	1099700	2123923	14752	14752
212210WYWT	1011000	1011000	212310	14110	14110	2123923111 pt	1475202 pt	1475201
2122211	10411	10411	2123101011	1411011	1411011	2123923111 pt	1475202 pt	1475203
2122211111	1041104	1041104	2123101021	1411015	1411015	2123923111 pt	1475202 pt	1475205
2122211121	1041121	1041121	2123101031	1411019	1411019	2123923131	1475207	1475207
2122211131	1041123	1041123	212310YWT	1411000	1411000	2123923YVW	14752XX	14752XX
2122211YVW	10411XX	10411XX	2123120	14220	14220	212392W	14750	14750
2122213	10412	10412	2123120100	1422000	1422000	212392WYWT	1475000	1475000
2122213100	1041200	1041200	2123120YWT	14220XX	14220XX	2123931	14791	14791
2122215	10413	10413	2123130	14230	14230	2123931100	1479100	1479100
2122215111	1041303	1041303	2123130100	1423000	1423000	2123933	14793	14793
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123933100	1479300	1479300
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123935	14794	14794
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123935100	1479400	1479400
212221WYWT	1041000	1041000	2123190 pt.	14990 pt	14990 pt	2123939	14798	14798
2122221	10441	10441	2123190 pt.	14990 pt	14990 pt	2123939100	1479800	1479800
2122221111	1044104	1044104	2123211	14421	14421	212393W	14790	14790
2122221121	1044121	1044121	2123211111	1442101	1442101	212393WYWT	1479000	1479000
2122221131	1044123	1044123	2123211121	1442105	1442105	2123991	14996	14996
2122221YVW	10441XX	10441XX	2123211YVW	14421XX	14421XX	2123991100	1499600	1499600
2122223	10442	10442	2123213	14422	14422	2123993	14997	14997
2122223100	1044200	1044200	2123213111	1442201	1442201	2123993100 pt	1499701 pt	1499712
2122225	10443	10443	2123213221	1442205	1442205	2123993100 pt	1499701 pt	1499722
2122225111	1044303	1044303	2123213YVW	14422XX	14422XX	2123995	14998	14998
2122225121	1044307	1044307	212321W	14420	14420	2123995100 pt	1499801 pt	1499812
2122225YVW	10443XX	10443XX	212321WYWT	1442000	1442000	2123995100 pt	1499801 pt	1499822
212222W	10440	10440	2123221	14461	14461	2123999 pt.	1499A pt	14991
212222WYWT	1044000	1044000	2123221100	1446100	1446100	2123999 pt.	1499A pt	14992 pt
2122311	10311	10311	2123223	14465	14465	2123999 pt.	1499A pt	14993
2122311111	1031104	1031104	2123223100	1446500	1446500	2123999 pt.	1499A pt	14994
2122311121	1031121	1031121	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122311131	1031123	1031123	2123229100	1446900	1446900	2123999 pt.	1499A pt	14995
2122311YVW	10311XX	10311XX						
2122313	10312	10312						
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Industrial Sand Mining

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1997 Economic Census

Mining

Industry Series



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Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Com-panies ¹	All estab-lish-ments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212322	Industrial sand mining	84	140	2 739	88 930	2 067	4 312	60 296	362 186	172 530	502 217	32 523
144600	Industrial sand	N	140	2 739	88 930	2 067	4 312	60 296	362 186	172 530	502 217	32 523

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
		Total	With 20 em-ploy-ees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212322, INDUSTRIAL SAND MINING												
United States	-	140	51	2 739	88 930	2 067	4 312	60 296	362 186	172 530	502 217	32 523
California	2	10	4	180	6 324	143	301	4 995	21 525	12 949	33 173	1 301
Illinois	-	10	7	383	14 207	280	624	9 493	66 552	26 376	89 101	3 827

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212322, INDUSTRIAL SAND MINING		212322, INDUSTRIAL SAND MINING—Con.	
Companies ¹	84	Value of primary products shipments or services produced in all industries	\$1,000.. 494 989
All establishments	140	Value of primary products shipments or services produced in this industry	\$1,000.. 472 748
Establishments with 0 to 19 employees	89	Value of primary products shipments or services produced in other industries	\$1,000.. 22 241
Establishments with 20 to 99 employees	50	Value added by mining	\$1,000.. 362 186
Establishments with 100 employees or more	1	Total inventories, end of 1996	\$1,000.. 48 293
All employees for pay period including March 12	2 739	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 32 020
Annual payroll	\$1,000.. 88 930	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 16 273
Annual fringe benefits not included in payroll	\$1,000.. 24 967	Total inventories, end of 1997	\$1,000.. 44 159
Production, development, and exploration workers for pay period including March 12	2 067	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 28 205
Production, development, and exploration worker annual hours	1,000.. 4 312	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 15 954
Production, development, and exploration worker annual wages	\$1,000.. 60 296	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 665 924
Total cost of supplies	\$1,000.. 172 530	Capital expenditures (except land and mineral rights)	\$1,000.. 32 523
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 97 246	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 32 117
Cost of resales	\$1,000.. 3 798	Capital expenditures for mineral exploration and development	\$1,000.. 406
Cost of purchased fuels consumed	\$1,000.. 25 823	Capital expenditures for mineral land and rights	\$1,000.. 23 242
Cost of purchased electricity	\$1,000.. 30 975	Deductions from depreciable/depletable assets during year	\$1,000.. 17 974
Cost of contract work	\$1,000.. 14 688	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 703 715
Quantity of electricity purchased	1,000 kWh.. 560 091	Total depreciation/depletion charges during year	\$1,000.. 42 710
Quantity of electricity generated less sold	1,000 kWh.. -	Total rental payments during year	\$1,000.. 5 244
Cost of purchased communications services	\$1,000.. 1 093	Rental payments for buildings and other structures	\$1,000.. 1 158
Total value of shipments and receipts	\$1,000.. 502 217	Rental payments for machinery and equipment	\$1,000.. 4 086
Primary products value of shipments	\$1,000.. 472 748	Lease rents	\$1,000.. 1 637
Secondary products value of shipments and receipts for services	\$1,000.. 24 880	Expensed mineral exploration, development, land, and rights	\$1,000.. 16 628
Value of resales	\$1,000.. 4 589		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212322, INDUSTRIAL SAND MINING												
All establishments	-	140	51	2 739	88 930	2 067	4 312	60 296	362 186	172 530	502 217	32 523
Establishments with 0 to 4 employees	5	45	-	118	3 736	81	175	2 616	11 649	8 588	19 107	1 130
Establishments with 5 to 9 employees	3	28	-	190	5 282	139	254	3 610	14 653	13 042	26 124	1 595
Establishments with 10 to 19 employees	1	16	-	225	6 514	167	316	4 302	22 275	13 168	31 177	4 266
Establishments with 20 to 49 employees	-	38	38	1 292	43 261	978	2 082	28 826	175 606	85 697	245 078	16 225
Establishments with 50 to 99 employees	-	12	12	D	D	D	D	D	D	D	D	D
Establishments with 100 to 249 employees	-	1	1	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	-	-	-	-	-	-	-	-	-	-	-	-
Establishments with 500 to 999 employees	-	-	-	-	-	-	-	-	-	-	-	-
Establishments with 1,000 to 2,499 employees	-	-	-	-	-	-	-	-	-	-	-	-
Establishments with 2,500 employees or more	-	-	-	-	-	-	-	-	-	-	-	-
Administrative records ²	9	43	-	186	4 009	132	182	2 738	12 437	7 137	18 304	1 270

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212322, INDUSTRIAL SAND MINING								
All establishments	140	51	2 739	88 930	2 067	4 312	60 296	362 186
Producing establishments	137	51	D	D	D	D	D	D
Mines or wells only	-	-	-	-	-	-	-	-
Underground mines	-	-	-	-	-	-	-	-
Open-pit mines	-	-	-	-	-	-	-	-
Combination mines, well operations, or other types of mines	-	-	-	-	-	-	-	-
Mines with preparation plants	130	49	2 657	86 623	2 003	4 181	59 111	356 376
Underground mines	1	1	D	D	D	D	D	D
Open-pit mines	128	47	D	D	D	D	D	D
Combination mines or other types of mines	1	1	D	D	D	D	D	D
Separately operated preparation plants	7	2	D	D	D	D	D	D
Undistributed ¹	-	-	-	-	-	-	-	-
Nonproducing establishments	3	-	D	D	D	D	D	D

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212322	Industrial sand	X	X	494 989	X	X	413 888
2123221	Industrial glass sand	X	X	211 887	X	X	177 949
21232211	Industrial glass sand	X	X	211 887	X	X	N
2123221100	Industrial glass sand	13.2	13.0	211 887	13.4	13.4	177 949
2123223	Industrial molding sand	X	X	83 099	X	X	68 951
21232231	Industrial molding sand	X	X	83 099	X	X	N
2123223100	Industrial molding sand	6.3	6.2	83 099	5.1	5.1	68 951
2123229	Other industrial sand	X	X	175 288	X	X	138 853
21232291	Other industrial sand	X	X	175 288	X	X	N
2123229100	Other industrial sand	7.4	7.2	175 288	6.9	6.8	138 853
212322W	Industrial sand, nsk	X	X	24 715	X	X	28 135
212322WY	Industrial sand, nsk	X	X	24 715	X	X	N
212322WYWWT	Industrial sand, nsk #	X	X	24 715	X	X	28 135

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2123221	INDUSTRIAL GLASS SAND		
	United States	211 887	177 949
	California	22 929	30 590
	Illinois	27 945	18 346
2123223	INDUSTRIAL MOLDING SAND		
	United States	83 099	68 951
	Illinois	23 135	14 160
2123229	OTHER INDUSTRIAL SAND		
	United States	175 288	138 853
	Illinois	36 409	31 418

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212322	INDUSTRIAL SAND MINING				
	SUPPLIES CONSUMED BY TYPE				
21231100	Rough blocks used to produce dressed stone 1,000 s tons..	-	-	-	-
21231005	Broken stone received for preparation (crushing, screening, washing, etc.) mil s tons..	D	D	D	D
21232001	Sand and gravel received for preparation mil s tons..	0.7	4 943	1.7	6 462
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	24 632	X	20 225
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	24 511	X	11 948
32592003	Explosive materials, except ammonium nitrate	X	1 411	X	624
32592005	Ammonium nitrate	X	D	X	570
32592007	Blasting accessories	X	129	X	D
32600007	Rubber and plastics products, including tires and tubes	X	627	X	333
33120059	Steel shapes and forms, except castings and forgings	X	1 507	X	659
00970098	All other supplies	X	28 789	X	37 020
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	9 037	X	9 401
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons..	D	D	D	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	83.5	2 661	128.9	4 010
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels..	33.3	824	36.8	737
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	6.4	17 103	5.9	13 348
32411015	Gasoline used as a fuel mil gal..	D	D	0.4	394
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	1 235	X	D
00974000	Undistributed fuels#	X	2 937	X	4 568

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212322 INDUSTRIAL SAND MINING

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) operating industrial grade sand pits; (2) dredging for industrial grade sand; and (3) washing, screening, or otherwise preparing industrial grade sand.

The data published with NAICS code 212322 include the following SIC industry:

1446 Industrial sand

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 212322WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents costs for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents costs for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes:

1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14551
2121113111	1221201	1221201	2122343	10212	10212	2123240 pt.	14552 pt	14552
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455100 pt
2121113331	1221218	1221218	2122345	10213	10213	2123240111 pt	1455211 pt	1455201
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455100 pt
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240121 pt	1455212 pt	1455202
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123240YWT	1455000	1455000
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251	14591	14591
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123251100	1459100	1459100
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253	14592	14592
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459211
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123253100 pt	1459200 pt	1459221
2121123	12222	12222	2122345YVW pt	1099733 pt	1099733 pt	2123255	14593	14593
2121123111	1222201	1222201	2122345YVW pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123221	1222217	1222217	2122911	10941	10941	2123257	14596	14596
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123257100	1459600	1459600
212112W	12220	12220	2122913	10942	10942	2123258	14597	14597
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094201 pt	2123258111	1459711	1459711
2121131	12311	12311	2122913111 pt	1094201 pt	1094201 pt	2123258121	1459721	1459721
2121131111	1231101	1231101	2122913121	1094205	1094205	2123258YVW	14597XX	14597XX
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259	14599	14599
2121131YVW	12311XX	12311XX	212291W	10940	10940	2123259100	1459900	1459900
2121133	12312	12312	212291WYWT	1094000	1094000	212325W	14590	14590
2121133111	1231201	1231201	2122991	10992	10992	212325WYWT	1459000	1459000
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14741
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14742
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911 pt.	14745 pt	14744
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474100
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474200
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123911100 pt	1474500 pt	1474400
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913	14743	14743
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913111	1474301	1474301
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913121	1474303	1474303
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	2123913YVW	14743XX	14743XX
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391W	14740	14740
2122103131	1011207	1011207	212299W pt.	10990 pt	10997 pt	212391WYWT	1474000	1474000
2122103YVW	10112XX	10112XX	212299WYWT pt	1099000 pt	1099700	2123921	14751	14751
212210W	10110	10110	212299WYWT pt	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
212210WYWT	1011000	1011000	2123110	14110	14110	2123921100 pt	1475100 pt	1475103
2122211	10411	10411	2123110111	1411011	1411011	2123921100 pt	1475100 pt	1475105
2122211111	1041104	1041104	2123110121	1411015	1411015	2123923	14752	14752
2122211121	1041121	1041121	2123110221	1411019	1411019	2123923111 pt	1475202 pt	1475201
2122211131	1041123	1041123	2123110391	1411019	1411019	2123923111 pt	1475202 pt	1475203
2122211YVW	10411XX	10411XX	2123110YWT	1411000	1411000	2123923111 pt	1475202 pt	1475205
2122213	10412	10412	2123120	14220	14220	2123923131	1475207	1475207
2122213100	1041200	1041200	2123120100	1422000	1422000	2123923YVW	14752XX	14752XX
2122215	10413	10413	2123120YWT	14220XX	14220XX	212392W	14750	14750
2122215111	1041303	1041303	2123130	14230	14230	212392WYWT	1475000	1475000
2122215121	1041307	1041307	2123130100	1423000	1423000	2123931	14791	14791
2122215YVW	10413XX	10413XX	2123130YWT	14230XX	14230XX	2123931100	1479100	1479100
212221W	10410	10410	2123190 pt.	14290	14290	2123933	14793	14793
212221WYWT	1041000	1041000	2123190 pt.	14990 pt	14990 pt	2123933100	1479300	1479300
2122221	10441	10441	2123190 pt.	1499A pt	14992 pt	2123935	14794	14794
2122221111	1044104	1044104	2123190111	1499A22	1499200 pt	2123935100	1479400	1479400
2122221121	1044121	1044121	2123190121	1429000	1429000	2123939	14798	14798
2122221131	1044123	1044123	2123190YWT pt	14290XX	14290XX	2123939100	1479800	1479800
2122221YVW	10441XX	10441XX	2123190YWT pt	1499000 pt	1499000 pt	212393W	14790	14790
2122223	10442	10442	2123211	14421	14421	212393WYWT	1479000	1479000
2122223100	1044200	1044200	2123211111	1442101	1442101	2123991	14996	14996
2122225	10443	10443	2123211111	1442105	1442105	2123991100	1499600	1499600
2122225111	1044303	1044303	2123211YVW	14421XX	14421XX	2123993	14997	14997
2122225121	1044307	1044307	2123213	14422	14422	2123993100 pt	1499701 pt	1499712
2122225YVW	10443XX	10443XX	2123213111	1442201	1442201	2123993100 pt	1499701 pt	1499722
212222W	10440	10440	2123213221	1442205	1442205	2123995	14998	14998
212222WYWT	1044000	1044000	2123213YVW	14422XX	14422XX	2123995100 pt	1499801 pt	1499812
2122231	10311	10311	212321W	14420	14420	2123995100 pt	1499801 pt	1499822
2122231111	1031104	1031104	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14992 pt
21222311121	1031121	1031121	2123221	14461	14461	2123999 pt.	1499A pt	14993
21222311131	1031123	1031123	2123221100	1446100	1446100	2123999 pt.	1499A pt	14994
2122231YVW	10311XX	10311XX	2123223	14465	14465	2123999 pt.	1499A pt	14995
21222313	10312	10312	2123223100	1446500	1446500	2123999 pt.	1499A pt	14995
21222313111	1031201	1031201	2123229	14469	14469	2123999 pt.	1499A pt	14995
21222313121	1031221	1031221	2123229100	1446900	1446900			
21222313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

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Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212324 145500	Kaolin & ball clay mining ... Kaolin & ball clay	20 N	33 33	3 530 3 530	141 310 141 310	2 546 2 546	5 647 5 647	90 108 90 108	630 199 630 199	363 528 363 528	917 294 917 294	76 433 76 433

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212324, KAOLIN & BALL CLAY MINING												
United States	-	33	29	3 530	141 310	2 546	5 647	90 108	630 199	363 528	917 294	76 433
Georgia	-	16	15	2 779	115 229	2 002	4 450	73 949	562 350	325 441	818 666	69 125

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212324, KAOLIN & BALL CLAY MINING		212324, KAOLIN & BALL CLAY MINING—Con.	
Companies ¹	20	Value of primary products shipments or services produced in all industries	\$1,000.. 871 877
All establishments	33	Value of primary products shipments or services produced in this industry	\$1,000.. D
Establishments with 0 to 19 employees	4	Value of primary products shipments or services produced in other industries	\$1,000.. D
Establishments with 20 to 99 employees	18	Value added by mining	\$1,000.. 630 199
Establishments with 100 employees or more	11	Total inventories, end of 1996	\$1,000.. 106 893
All employees for pay period including March 12	3 530	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 84 347
Annual payroll	141 310	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 22 546
Annual fringe benefits not included in payroll	\$1,000.. 49 217	Total inventories, end of 1997	\$1,000.. 112 214
Production, development, and exploration workers for pay period including March 12	2 546	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 88 044
Production, development, and exploration worker annual hours	1,000.. 5 647	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 24 170
Production, development, and exploration worker annual wages	\$1,000.. 90 108	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 1 396 439
Total cost of supplies	\$1,000.. 363 528	Capital expenditures (except land and mineral rights)	\$1,000.. 76 433
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 210 139	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. D
Cost of resales	\$1,000.. D	Capital expenditures for mineral exploration and development	\$1,000.. D
Cost of purchased fuels consumed	\$1,000.. 55 460	Capital expenditures for mineral land and rights	\$1,000.. 2 779
Cost of purchased electricity	\$1,000.. 43 691	Deductions from depreciable/depletable assets during year	\$1,000.. 6 668
Cost of contract work	\$1,000.. D	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 1 468 983
Quantity of electricity purchased	1,000 kWh.. 1 112 667	Total depreciation/depletion charges during year	\$1,000.. 73 045
Quantity of electricity generated less sold	1,000 kWh.. —	Total rental payments during year	\$1,000.. 5 260
Cost of purchased communications services	\$1,000.. 1 408	Rental payments for buildings and other structures	\$1,000.. 714
Total value of shipments and receipts	\$1,000.. 917 294	Rental payments for machinery and equipment	\$1,000.. 4 546
Primary products value of shipments	\$1,000.. D	Lease rents	\$1,000.. 2 468
Secondary products value of shipments and receipts for services	\$1,000.. 43 052	Expensed mineral exploration, development, land, and rights	\$1,000.. 34 959
Value of resales	\$1,000.. D		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212324, KAOLIN & BALL CLAY MINING												
All establishments	—	33	29	3 530	141 310	2 546	5 647	90 108	630 199	363 528	917 294	76 433
Establishments with 0 to 4 employees	—	1	—	D	D	D	D	D	D	D	D	D
Establishments with 5 to 9 employees	—	1	—	D	D	D	D	D	D	D	D	D
Establishments with 10 to 19 employees	3	2	—	D	D	D	D	D	D	D	D	D
Establishments with 20 to 49 employees	—	10	10	355	11 719	272	627	7 903	43 991	22 525	62 805	3 711
Establishments with 50 to 99 employees	—	8	8	532	19 439	367	820	11 658	45 144	36 693	75 029	6 808
Establishments with 100 to 249 employees	—	8	8	1 309	52 827	1 018	2 218	37 489	304 877	151 109	435 048	20 938
Establishments with 250 to 499 employees	—	3	3	1 300	56 173	864	1 931	32 334	233 447	150 274	339 082	44 639
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	—	—	—	—	—	—	—	—	—	—	—	—

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212324, KAOLIN & BALL CLAY MINING								
All establishments	33	29	3 530	141 310	2 546	5 647	90 108	630 199
Producing establishments	33	29	3 530	141 310	2 546	5 647	90 108	630 199
Mines or wells only	5	3	303	11 961	205	406	7 215	31 625
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	5	3	303	11 961	205	406	7 215	31 625
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	28	26	3 227	129 349	2 341	5 241	82 893	598 574
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	27	25	D	D	D	D	D	D
Combination mines or other types of mines	1	1	D	D	D	D	D	D
Separately operated preparation plants	—	—	—	—	—	—	—	—
Undistributed ¹	—	—	—	—	—	—	—	—
Nonproducing establishments	—	—	—	—	—	—	—	—

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212324	Kaolin and ball clay	X	X	871 877	X	X	749 891
2123240	Kaolin and ball clay	X	X	871 877	X	X	N
21232401	Kaolin and ball clay	X	X	871 877	X	X	N
2123240111	Kaolin	X	X	9 375.2	X	N	N
2123240121	Ball clay	X	X	1 093.2	X	N	N
2123240YWT	Kaolin and ball clay, nsk #	X	X	—	X	X	—

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Not applicable for this report]

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212324	KAOLIN & BALL CLAY MINING				
	SUPPLIES CONSUMED BY TYPE				
21232013	Crude clay, ceramic, and refractory minerals received for preparation 1,000 metric tons..	385.9	3 468	2 509.2	19 753
21232015	Crude clay, ceramic, and refractory minerals mined and prepared at same establishment 1,000 metric tons..	8 584.5	X	8 360.2	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	55 456	X	43 834
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	27 366	X	D
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	68 189	X	42 911
33120059	Steel shapes and forms, except castings and forgings	X	D	X	D
00970098	All other supplies	X	49 718	X	N
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	D	X	228
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons..	D	D	D	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels..	D	D	102.1	3 045
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels..	D	D	D	D
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft..	14.0	43 932	16.1	33 177
32411015	Gasoline used as a fuel mil gal..	0.7	805	0.6	566
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	582	X	344
00974000	Undistributed fuels#	X	272	X	D

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212324 KAOLIN AND BALL CLAY MINING

This U.S. industry comprises (1) establishments primarily engaged in developing the mine site and/or mining kaolin or ball clay (e.g., china clay, paper clay, and slip clay) and (2) establishments primarily engaged in beneficiating (i.e., preparing) kaolin or ball clay.

The data published with NAICS code 212324 include the following SIC industry:

1455 Kaolin and ball clay

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Mining did not fully implement the conversion to NAICS. Data for NAICS industry 212324 do not include establishments only engaged in beneficiating or preparing kaolin and ball clay. The NAICS definitions will be fully implemented with the 2002 Economic Census.

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2123240YWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents costs for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents costs for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
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2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
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2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
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212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
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2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
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2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
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2121131YVW	12311XX	12311XX	212291W	10940	10940	212325WYWT	1459000	1459000
2121133	12312	12312	212291WYWT	1094000	1094000	2123911 pt.	14745 pt	14741
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2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14744
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911100 pt	1474500 pt	1474100
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474200
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474400
2122101	10111	10111	2122993121	1099731	1099731	2123913	14743	14743
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2122211111	1041104	1041104	2123110221	1411019	1411019	2123923111 pt	1475202 pt	1475205
2122211121	1041121	1041121	2123110YWT	1411000	1411000	2123923131	1475207	1475207
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2122311YVW	10311XX	10311XX	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122313	10312	10312	2123229100	1446900	1446900			
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
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2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Clay and Ceramic and Refractory Minerals Mining

1997

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Com-panies ¹	All estab-lish-ments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212325	Clay & ceramic & refractory minerals mining	99	131	3 778	118 308	2 953	5 987	87 135	434 023	256 446	618 256	72 213
145900	Clay, ceramic, & refractory minerals, n.e.c.	N	131	3 778	118 308	2 953	5 987	87 135	434 023	256 446	618 256	72 213

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)	
	E ¹	Total	With 20 em-ploy-ees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)					Annual wages (\$1,000)
212325, CLAY & CERAMIC & REFRACTORY MINERALS MINING												
United States	-	131	55	3 778	118 308	2 953	5 987	87 135	434 023	256 446	618 256	72 213
Alabama	4	9	3	206	5 294	164	290	3 871	11 175	8 204	18 094	1 285
California	-	10	2	149	5 524	99	181	2 802	25 158	6 696	30 748	1 106
Georgia	-	7	5	469	14 699	385	841	11 132	46 243	21 310	62 435	5 118
Mississippi	-	9	5	400	10 380	340	608	8 105	33 524	22 079	49 634	5 969
Wyoming.....	-	13	9	519	17 837	441	941	14 747	85 531	68 414	145 923	8 022

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212325, CLAY & CERAMIC & REFRACTORY MINERALS MINING		212325, CLAY & CERAMIC & REFRACTORY MINERALS MINING—Con.	
Companies ¹	99	Value of primary products shipments or services produced in all industries	\$1,000.. 611 031
All establishments	131	Value of primary products shipments or services produced in this industry	\$1,000.. 602 270
Establishments with 0 to 19 employees	76	Value of primary products shipments or services produced in other industries	\$1,000.. 8 761
Establishments with 20 to 99 employees	48	Value added by mining	\$1,000.. 434 023
Establishments with 100 employees or more	7	Total inventories, end of 1996	\$1,000.. 75 062
All employees for pay period including March 12	3 778	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 53 060
Annual payroll	118 308	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 22 002
Annual fringe benefits not included in payroll	29 374	Total inventories, end of 1997	\$1,000.. 79 948
Production, development, and exploration workers for pay period including March 12	2 953	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 57 780
Production, development, and exploration worker annual hours	5 987	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 22 168
Production, development, and exploration worker annual wages	87 135	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 560 272
Total cost of supplies	256 446	Capital expenditures (except land and mineral rights)	\$1,000.. 72 213
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 157 225	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 71 078
Cost of resales	\$1,000.. 10 604	Capital expenditures for mineral exploration and development	\$1,000.. 1 135
Cost of purchased fuels consumed	\$1,000.. 38 639	Capital expenditures for mineral land and rights	\$1,000.. 1 562
Cost of purchased electricity	\$1,000.. 23 639	Deductions from depreciable/depletable assets during year	\$1,000.. 25 665
Cost of contract work	\$1,000.. 26 339	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 608 382
Quantity of electricity purchased	1,000 kWh.. 434 277	Total depreciation/depletion charges during year	\$1,000.. 31 826
Quantity of electricity generated less sold	1,000 kWh.. D	Total rental payments during year	\$1,000.. 6 340
Cost of purchased communications services	\$1,000.. 916	Rental payments for buildings and other structures	\$1,000.. 1 199
Total value of shipments and receipts	\$1,000.. 618 256	Rental payments for machinery and equipment	\$1,000.. 5 141
Primary products value of shipments	\$1,000.. 602 270	Lease rents	\$1,000.. 1 503
Secondary products value of shipments and receipts for services	\$1,000.. 3 510	Expensed mineral exploration, development, land, and rights	\$1,000.. 21 093
Value of resales	\$1,000.. 12 476		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212325, CLAY & CERAMIC & REFRACTORY MINERALS MINING												
All establishments	-	131	55	3 778	118 308	2 953	5 987	87 135	434 023	256 446	618 256	72 213
Establishments with 0 to 4 employees	6	39	-	105	2 748	72	123	1 983	6 446	4 153	9 171	1 428
Establishments with 5 to 9 employees	3	29	-	198	5 540	153	253	3 959	17 225	4 797	16 284	5 738
Establishments with 10 to 19 employees	-	8	-	110	3 385	79	144	2 321	13 133	7 505	19 045	1 593
Establishments with 20 to 49 employees	-	29	29	1 000	31 717	785	1 590	23 381	117 474	76 954	163 221	31 207
Establishments with 50 to 99 employees	-	19	19	1 347	43 762	1 075	2 289	34 365	172 653	100 164	252 634	20 183
Establishments with 100 to 249 employees	-	7	7	1 018	31 156	789	1 588	21 126	107 092	62 873	157 901	12 064
Establishments with 250 to 499 employees	-	-	-	-	-	-	-	-	-	-	-	-
Establishments with 500 to 999 employees	-	-	-	-	-	-	-	-	-	-	-	-
Establishments with 1,000 to 2,499 employees	-	-	-	-	-	-	-	-	-	-	-	-
Establishments with 2,500 employees or more	-	-	-	-	-	-	-	-	-	-	-	-
Administrative records ²	9	38	-	213	3 412	124	173	2 536	8 091	3 636	10 903	824

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212325, CLAY & CERAMIC & REFRACTORY MINERALS MINING								
All establishments	131	55	3 778	118 308	2 953	5 987	87 135	434 023
Producing establishments	130	55	D	D	D	D	D	D
Mines or wells only	53	3	470	10 438	324	501	7 401	23 747
Underground mines	-	-	-	-	-	-	-	-
Open-pit mines	52	3	D	D	D	D	D	D
Combination mines, well operations, or other types of mines	1	-	D	D	D	D	D	D
Mines with preparation plants	77	52	D	D	D	D	D	D
Underground mines	-	-	-	-	-	-	-	-
Open-pit mines	76	52	3 300	107 491	2 624	5 476	79 540	409 671
Combination mines or other types of mines	1	-	D	D	D	D	D	D
Separately operated preparation plants	-	-	-	-	-	-	-	-
Undistributed ¹	-	-	-	-	-	-	-	-
Nonproducing establishments	1	-	D	D	D	D	D	D

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212325	Clay, ceramic and refractory minerals	X	X	611 031	X	X	611 068
2123251	Bentonite	X	X	180 462	X	X	142 490
21232511	Bentonite	X	X	180 462	X	X	N
2123251100	Bentonite 1,000 metric tons..	X	4 106.6	180 462	X	3 364.7	142 490
2123253	Fire clay	X	X	2 806	X	X	5 896
21232531	Fire clay	X	X	2 806	X	X	N
2123253100	Fire clay # 1,000 metric tons..	X	318.7	2 806	X	X	N
2123255	Fuller's earth	X	X	225 660	X	X	180 477
21232551	Fuller's earth	X	X	225 660	X	X	N
2123255100	Fuller's earth 1,000 metric tons..	X	1 553.5	225 660	X	1 915.4	180 477
2123257	Feldspar (crude, crushed, or ground)	X	X	37 341	X	X	96 746
21232571	Feldspar (crude, crushed, or ground)	X	X	37 341	X	X	N
2123257100	Feldspar (crude, crushed, or ground) 1,000 metric tons..	X	644.3	37 341	X	2 128.1	96 746
2123258	Common (miscellaneous) clay and shale	X	X	91 958	X	X	87 257
21232581	Common (miscellaneous) clay and shale	X	X	91 958	X	X	N
2123258111	Crude common (miscellaneous) clay and shale 1,000 metric tons..	X	724.8	5 084	X	1 419.2	7 467
2123258121	Prepared common (miscellaneous) clay and shale 1,000 metric tons..	X	3 750.1	86 874	X	4 310.3	79 790
2123259	Other clay, ceramic, and refractory minerals including magnesite and brucite	X	X	61 370	X	X	84 387
21232591	Other clay, ceramic, and refractory minerals including magnesite and brucite	X	X	61 370	X	X	N
2123259100	Other clay, ceramic, and refractory minerals including magnesite and brucite 1,000 metric tons..	X	1 085.5	61 370	X	1 488.9	84 387
212325W	Other clay, ceramic, and refractory minerals, nsk	X	X	11 434	X	X	13 815
212325WY	Other clay, ceramic, and refractory minerals, nsk	X	X	11 434	X	X	N
212325WYWT	Other clay, ceramic, and refractory minerals, nsk #	X	X	11 434	X	X	13 815

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2123251	BENTONITE		
	United States	180 462	142 490
	Wyoming	140 300	86 582
2123253	FIRE CLAY		
	United States	2 806	5 896
2123255	FULLER'S EARTH		
	United States	225 660	180 477
	Georgia	56 652	66 168
2123257	FELDSPAR (CRUDE, CRUSHED, OR GROUND)		
	United States	37 341	96 746
2123258	COMMON (MISCELLANEOUS) CLAY AND SHALE		
	United States	91 958	87 257
2123259	OTHER CLAY, CERAMIC, AND REFRACTORY MINERALS INCLUDING MAGNESITE AND BRUCITE		
	United States	61 370	84 387

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212325	CLAY & CERAMIC & REFRACTORY MINERALS MINING				
	SUPPLIES CONSUMED BY TYPE				
21232013	Crude clay, ceramic, and refractory minerals received for preparation	1,000 metric tons..	D	907.1	10 837
21232015	Crude clay, ceramic, and refractory minerals mined and prepared at same establishment	1,000 metric tons..	X	12 946.9	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation		X	X	22 670
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment		X	X	14 208
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories		X	X	4 717
33120059	Steel shapes and forms, except castings and forgings		X	X	4 597
00970098	All other supplies		X	X	N
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#		X	X	16 208
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel	1,000 s tons..	241.3	6 897	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel	1,000 barrels..	207.4	4 696	259.1
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel	1,000 barrels..	68.5	1 333	D
21111015	Gas (natural, manufactured, and mixed) used as a fuel	bil cu ft..	7.0	20 077	8.5
32411015	Gasoline used as a fuel	mil gal..	0.4	427	0.7
00960018	Other fuels (liquefied pet. gas, coke, wood, etc.)		X	X	452
00974000	Undistributed fuels#		X	X	D

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class. . . .	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212325 CLAY AND CERAMIC AND REFRACTORY MINERALS MINING

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) mining clay (except kaolin and ball), ceramic, or refractory minerals; (2) developing the mine site for clay, ceramic, or refractory minerals; and (3) beneficiating (i.e., preparing) clay (except kaolin and ball), ceramic, or refractory minerals.

The data published with NAICS code 212325 include the following SIC industry:

1459 Clay, ceramic, and refractory minerals, n.e.c.

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Mining did not fully implement the conversion to NAICS. Data for NAICS industry 212325 do not include establishments only engaged in beneficiating or preparing clay, ceramic and refractory minerals. The NAICS definitions will be fully implemented with the 2002 Economic Census.

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2123253100	Excludes quantity of crude clay mined and used at establishments classified in manufacturing industries.
# 212325WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325W	14590	14590
2121133	12312	12312	212291WYWT	1094000	1094000	212325WYWT	1459000	1459000
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14741
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14742
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14744
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474100
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474200
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474400
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913	14743	14743
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913111	1474301	1474301
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913121	1474303	1474303
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913YVW	14743XX	14743XX
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391W	14740	14740
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391WYWT	1474000	1474000
2122103131	1011207	1011207	212299W pt.	1099000 pt	1099000 pt	2123921	14751	14751
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
212210W	10110	10110	212310	14110	14110	2123921100 pt	1475100 pt	1475103
212210WYWT	1011000	1011000	2123101011	1411011	1411011	2123921100 pt	1475100 pt	1475105
2122211	10411	10411	2123101021	1411015	1411015	2123923	14752	14752
2122211111	1041104	1041104	2123101021	1411019	1411019	2123923111 pt	1475202 pt	1475201
2122211121	1041121	1041121	2123101031	1411019	1411019	2123923111 pt	1475202 pt	1475203
2122211131	1041123	1041123	21231010YWT	1411000	1411000	2123923111 pt	1475202 pt	1475205
2122211YVW	10411XX	10411XX	2123120	14220	14220	2123923131	1475207	1475207
2122213	10412	10412	2123120100	1422000	1422000	2123923YVW	14752XX	14752XX
2122213100	1041200	1041200	2123120YWT	14220XX	14220XX	212392W	14750	14750
2122215	10413	10413	2123130	14230	14230	212392WYWT	1475000	1475000
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931	14791	14791
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123931100	1479100	1479100
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933	14793	14793
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123933100	1479300	1479300
212221WYWT	1041000	1041000	2123190 pt.	1499A pt	14992 pt	2123935	14794	14794
2122221	10441	10441	2123190111	1499A22	1499200 pt	2123935100	1479400	1479400
2122221111	1044104	1044104	2123190121	1429000	1429000	2123939	14798	14798
2122221121	1044121	1044121	2123190YWT pt	14290XX	14290XX	2123939100	1479800	1479800
2122221131	1044123	1044123	2123211	14421	14421	212393W	14790	14790
2122221YVW	10441XX	10441XX	2123211111	1442101	1442101	212393WYWT	1479000	1479000
2122223	10442	10442	2123211121	1442105	1442105	2123991	14996	14996
2122223100	1044200	1044200	2123211YVW	14421XX	14421XX	2123991100	1499600	1499600
2122225	10443	10443	2123213	14422	14422	2123993	14997	14997
2122225111	1044303	1044303	2123213111	1442201	1442201	2123993100 pt	1499701 pt	1499712
2122225121	1044307	1044307	2123213221	1442205	1442205	2123993100 pt	1499701 pt	1499722
2122225YVW	10443XX	10443XX	2123213YVW	14422XX	14422XX	2123995	14998	14998
212222W	10440	10440	212321W	14420	14420	2123995100 pt	1499801 pt	1499812
212222WYWT	1044000	1044000	212321WYWT	1442000	1442000	2123995100 pt	1499801 pt	1499822
2122311	10311	10311	2123221	14461	14461	2123999 pt.	1499A pt	14991
2122311111	1031104	1031104	2123221100	1446100	1446100	2123999 pt.	1499A pt	14992 pt
2122311121	1031121	1031121	2123223	14465	14465	2123999 pt.	1499A pt	14993
2122311131	1031123	1031123	2123223100	1446500	1446500	2123999 pt.	1499A pt	14994
2122311YVW	10311XX	10311XX	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122313	10312	10312	2123229100	1446900	1446900			
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

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Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212391	Potash, soda, & borate mineral mining	18	27	4 805	237 391	3 849	8 044	177 739	1 295 896	557 588	1 702 985	150 499
147400	Potash, soda, & borate minerals	N	27	4 805	237 391	3 849	8 044	177 739	1 295 896	557 588	1 702 985	150 499

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212391, POTASH, SODA, & BORATE MINERAL MINING												
United States	-	27	19	4 805	237 391	3 849	8 044	177 739	1 295 896	557 588	1 702 985	150 499

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212391, POTASH, SODA, & BORATE MINERAL MINING		212391, POTASH, SODA, & BORATE MINERAL MINING—Con.	
Companies ¹	18	Value of primary products shipments or services produced in all industries	\$1,000.. 1 689 575
All establishments	27	Value of primary products shipments or services produced in this industry	\$1,000.. 1 689 575
Establishments with 0 to 19 employees	8	Value of primary products shipments or services produced in other industries	\$1,000.. —
Establishments with 20 to 99 employees	7	Value added by mining	\$1,000.. 1 295 896
Establishments with 100 employees or more	12	Total inventories, end of 1996	\$1,000.. 131 172
All employees for pay period including March 12	4 805	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 76 998
Annual payroll	237 391	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 54 174
Annual fringe benefits not included in payroll	74 636	Total inventories, end of 1997	\$1,000.. 137 025
Production, development, and exploration workers for pay period including March 12	3 849	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 77 541
Production, development, and exploration worker annual hours	8 044	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 59 484
Production, development, and exploration worker annual wages	177 739	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 2 388 541
Total cost of supplies	557 588	Capital expenditures (except land and mineral rights)	\$1,000.. 150 499
Cost of supplies used, minerals received, and purchased machinery installed	300 819	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. D
Cost of resales	D	Capital expenditures for mineral exploration and development	\$1,000.. D
Cost of purchased fuels consumed	116 945	Capital expenditures for mineral land and rights	\$1,000.. 14 694
Cost of purchased electricity	55 703	Deductions from depreciable/depletable assets during year	\$1,000.. 28 859
Cost of contract work	D	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 2 524 875
Quantity of electricity purchased	1 317 100	Total depreciation/depletion charges during year	\$1,000.. 94 404
Quantity of electricity generated less sold	D	Total rental payments during year	\$1,000.. 8 216
Cost of purchased communications services	1 072	Rental payments for buildings and other structures	\$1,000.. 393
Total value of shipments and receipts	1 702 985	Rental payments for machinery and equipment	\$1,000.. 7 823
Primary products value of shipments	1 689 575	Lease rents	\$1,000.. 865
Secondary products value of shipments and receipts for services	D	Expensed mineral exploration, development, land, and rights	\$1,000.. 79 524
Value of resales	D		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212391, POTASH, SODA, & BORATE MINERAL MINING												
All establishments	—	27	19	4 805	237 391	3 849	8 044	177 739	1 295 896	557 588	1 702 985	150 499
Establishments with 0 to 4 employees	—	4	—	D	D	D	D	D	D	D	D	D
Establishments with 5 to 9 employees	—	3	—	24	1 011	18	31	681	1 399	D	1 665	D
Establishments with 10 to 19 employees	9	1	—	D	D	D	D	D	D	D	D	D
Establishments with 20 to 49 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 50 to 99 employees	—	5	5	275	12 394	226	476	9 294	86 022	23 892	104 985	4 929
Establishments with 100 to 249 employees	—	6	6	1 204	51 696	1 000	1 818	38 832	644 653	148 299	759 619	33 333
Establishments with 250 to 499 employees	—	3	3	1 024	40 354	911	1 862	34 250	169 613	79 373	217 978	31 008
Establishments with 500 to 999 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 1,000 to 2,499 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	—	—	—	—	—	—	—	—	—	—	—	—

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212391, POTASH, SODA, & BORATE MINERAL MINING								
All establishments	27	19	4 805	237 391	3 849	8 044	177 739	1 295 896
Producing establishments	27	19	4 805	237 391	3 849	8 044	177 739	1 295 896
Mines or wells only	2	1	D	D	D	D	D	D
Underground mines	1	1	D	D	D	D	D	D
Open-pit mines	1	-	D	D	D	D	D	D
Combination mines, well operations, or other types of mines	-	-	-	-	-	-	-	-
Mines with preparation plants	23	17	D	D	D	D	D	D
Underground mines	11	10	4 091	205 192	3 272	6 901	154 925	741 906
Open-pit mines	1	1	D	D	D	D	D	D
Combination mines or other types of mines	11	6	D	D	D	D	D	D
Separately operated preparation plants	2	1	D	D	D	D	D	D
Undistributed ¹	-	-	-	-	-	-	-	-
Nonproducing establishments	-	-	-	-	-	-	-	-

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212391	Potash, soda, and borate	X	X	1 689 575	X	X	1 505 528
2123911	Potassium salts and boron compounds	X	X	725 032	X	X	N
21239111	Potassium salts and boron compounds	X	X	725 032	X	X	N
2123911100	Potassium salts and boron compounds .. 1,000 metric tons..	4 424.6	4 320.4	725 032	N	N	N
2123913	Sodium carbonate and sulfate	X	X	964 543	X	X	860 467
21239131	Sodium carbonate and sulfate	X	X	964 543	X	X	N
2123913111	Sodium carbonate (natural)	X	D	D	X	9 455.2	832 903
2123913121	Sodium sulfate (natural) .. 1,000 metric tons..	X	D	D	X	341.1	27 564
212391W	Potash, soda, and borate minerals, nsk	X	X	-	X	X	4 349
212391WYWT	Potash, soda, and borate minerals, nsk #	X	X	-	X	X	4 349

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2123911	POTASSIUM SALTS AND BORON COMPOUNDS		
	United States	725 032	N
2123913	SODIUM CARBONATE AND SULFATE		
	United States	964 543	860 467

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212391	POTASH, SODA, & BORATE MINERAL MINING				
	SUPPLIES CONSUMED BY TYPE				
21239003	Crude minerals received for preparation mil metric tons (dry basis) ..	D	D	D	D
21239005	Crude minerals mined and prepared at same establishment mil metric tons (dry basis) ..	35.6	X	33.3	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	69 009	X	45 702
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	67 167	X	53 775
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	93 749	X	42 531
32592001	Explosive materials (including ammonium nitrate) and blasting accessories	X	2 765	X	D
33120059	Steel shapes and forms, except castings and forgings	X	4 543	X	15 848
00970098	All other supplies	X	45 168	X	41 084
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	D	X	845
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel	1 712.2	43 827	1 329.1	32 862
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel	D	D	D	D
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel	D	D	D	D
21111015	Gas (natural, manufactured, and mixed) used as a fuel	25.2	51 901	27.8	51 066
32411015	Gasoline used as a fuel	0.3	322	1.4	1 197
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	D	X	D
00974000	Undistributed fuels#	X	D	X	272

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212391 POTASH, SODA, AND BORATE MINERAL MINING

This U.S. industry comprises establishments primarily engaged in developing the mine site, mining and/or milling, or otherwise beneficiating (i.e., preparing) natural potassium, sodium, or boron compounds. Dry-lake brine

operations are included in this industry, as well as establishments engaged in producing the specified minerals from underground and open pit mines.

The data published with NAICS code 212391 include the following SIC industry:

1474 Potash, soda, and borate minerals

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 212391WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325W	14590	14590
2121133	12312	12312	212291WYWT	1094000	1094000	212325WYWT	1459000	1459000
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14741
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14742
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14744
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474100
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474200
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474400
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913	14743	14743
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913111	1474301	1474301
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913121	1474303	1474303
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913YVW	14743XX	14743XX
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391W	14740	14740
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391WYWT	1474000	1474000
2122103131	1011207	1011207	212299WYWT pt.	1099000 pt	1099000 pt	2123921	14751	14751
2122103YVW	10112XX	10112XX	212310	14110	14110	2123921100 pt	1475100 pt	1475101
212210W	10110	10110	2123101011	1411011	1411011	2123921100 pt	1475100 pt	1475103
212210WYWT	1011000	1011000	2123101021	1411015	1411015	2123923	14752	14752
2122211	10411	10411	2123101031	1411019	1411019	2123923111 pt	1475202 pt	1475201
2122211111	1041104	1041104	2123101091	1411019	1411019	2123923111 pt	1475202 pt	1475203
2122211121	1041121	1041121	21231010YWT	1411000	1411000	2123923111 pt	1475202 pt	1475205
2122211131	1041123	1041123	2123120	14220	14220	2123923131	1475207	1475207
2122211YVW	10411XX	10411XX	2123120100	1422000	1422000	2123923YVW	14752XX	14752XX
2122213	10412	10412	2123120YWT	14220XX	14220XX	212392W	14750	14750
2122213100	1041200	1041200	2123130	14230	14230	212392WYWT	1475000	1475000
2122215	10413	10413	2123130100	1423000	1423000	2123931	14791	14791
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931100	1479100	1479100
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123933	14793	14793
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933100	1479300	1479300
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123935	14794	14794
212221WYWT	1041000	1041000	2123190 pt.	14990 pt	14990 pt	2123935100	1479400	1479400
2122221	10441	10441	2123190 pt.	1499A pt	14992 pt	2123939	14798	14798
2122221111	1044104	1044104	2123190111	1499A22	1499200 pt	2123939100	1479800	1479800
2122221121	1044121	1044121	2123190121	1429000	1429000	212393W	14790	14790
2122221131	1044123	1044123	2123190YWT pt	14290XX	14290XX	212393WYWT	1479000	1479000
2122221YVW	10441XX	10441XX	2123190YWT pt	1499000 pt	1499000 pt	2123991	14996	14996
2122223	10442	10442	2123211	14421	14421	2123991100	1499600	1499600
2122223100	1044200	1044200	2123211111	1442101	1442101	2123993	14997	14997
2122225	10443	10443	2123211111	1442105	1442105	2123993100 pt	1499701 pt	1499712
2122225111	1044303	1044303	2123211YVW	14421XX	14421XX	2123993100 pt	1499701 pt	1499722
2122225121	1044307	1044307	2123213	14422	14422	2123995	14998	14998
2122225YVW	10443XX	10443XX	2123213111	1442201	1442201	2123995100 pt	1499801 pt	1499812
212222W	10440	10440	2123213221	1442205	1442205	2123995100 pt	1499801 pt	1499822
212222WYWT	1044000	1044000	2123213YVW	14422XX	14422XX	2123999 pt.	1499A pt	14991
2122311	10311	10311	212321W	14420	14420	2123999 pt.	1499A pt	14992 pt
2122311111	1031104	1031104	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14993
2122311121	1031121	1031121	2123221	14461	14461	2123999 pt.	1499A pt	14994
2122311131	1031123	1031123	2123221100	1446100	1446100	2123999 pt.	1499A pt	14995
2122311YVW	10311XX	10311XX	2123223	14465	14465	2123999 pt.	1499A pt	14995
2122313	10312	10312	2123223100	1446500	1446500	2123999 pt.	1499A pt	14995
2122313111	1031201	1031201	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122313121	1031221	1031221	2123229100	1446900	1446900			
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Phosphate Rock Mining

1997

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1997 Economic Census

Mining

Industry Series



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Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Com-panies ¹	All estab-lish-ments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212392	Phosphate rock mining	15	20	3 858	169 479	3 140	7 291	122 343	639 055	509 869	1 016 889	132 035
147500	Phosphate rock	N	20	3 858	169 479	3 140	7 291	122 343	639 055	509 869	1 016 889	132 035

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 em-ploy-ees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212392, PHOSPHATE ROCK MINING												
United States	-	20	14	3 858	169 479	3 140	7 291	122 343	639 055	509 869	1 016 889	132 035
Florida	-	11	7	2 961	127 866	2 478	5 838	92 659	505 764	370 938	763 969	112 733

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212392, PHOSPHATE ROCK MINING		212392, PHOSPHATE ROCK MINING—Con.	
Companies ¹	15	Value of primary products shipments or services produced in all industries	\$1,000.. 1 006 370
All establishments	20	Value of primary products shipments or services produced in this industry	\$1,000.. 1 006 370
Establishments with 0 to 19 employees	6	Value of primary products shipments or services produced in other industries	\$1,000.. —
Establishments with 20 to 99 employees	2	Value added by mining	\$1,000.. 639 055
Establishments with 100 employees or more	12	Total inventories, end of 1996	\$1,000.. 151 627
All employees for pay period including March 12	3 858	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 110 615
Annual payroll	169 479	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 41 012
Annual fringe benefits not included in payroll	44 833	Total inventories, end of 1997	\$1,000.. 178 592
Production, development, and exploration workers for pay period including March 12	3 140	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 136 186
Production, development, and exploration worker annual hours	7 291	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 42 406
Production, development, and exploration worker annual wages	122 343	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 3 030 443
Total cost of supplies	\$1,000.. 509 869	Capital expenditures (except land and mineral rights)	\$1,000.. 132 035
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 301 181	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. D
Cost of resales	\$1,000.. D	Capital expenditures for mineral exploration and development	\$1,000.. D
Cost of purchased fuels consumed	\$1,000.. 20 055	Capital expenditures for mineral land and rights	\$1,000.. 6 365
Cost of purchased electricity	\$1,000.. 117 765	Deductions from depreciable/depletable assets during year	\$1,000.. 54 078
Cost of contract work	\$1,000.. D	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 3 114 765
Quantity of electricity purchased	1,000 kWh.. 2 932 558	Total depreciation/depletion charges during year	\$1,000.. 157 920
Quantity of electricity generated less sold	1,000 kWh.. D	Total rental payments during year	\$1,000.. 28 324
Cost of purchased communications services	\$1,000.. 2 737	Rental payments for buildings and other structures	\$1,000.. 2 756
Total value of shipments and receipts	\$1,000.. 1 016 889	Rental payments for machinery and equipment	\$1,000.. 25 568
Primary products value of shipments	\$1,000.. 1 006 370	Lease rents	\$1,000.. 513
Secondary products value of shipments and receipts for services	\$1,000.. D	Expensed mineral exploration, development, land, and rights	\$1,000.. 23 953
Value of resales	\$1,000.. D		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212392, PHOSPHATE ROCK MINING												
All establishments	—	20	14	3 858	169 479	3 140	7 291	122 343	639 055	509 869	1 016 889	132 035
Establishments with 0 to 4 employees	6	2	—	D	D	D	D	D	D	D	D	D
Establishments with 5 to 9 employees	9	3	—	D	D	D	D	D	D	D	D	D
Establishments with 10 to 19 employees	—	1	—	D	D	D	D	D	D	D	D	D
Establishments with 20 to 49 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 50 to 99 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 100 to 249 employees	—	10	10	1 725	78 281	1 341	2 851	55 139	437 828	366 008	720 097	83 739
Establishments with 250 to 499 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	3	—	17	581	14	22	432	1 378	619	1 856	141

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212392, PHOSPHATE ROCK MINING								
All establishments	20	14	3 858	169 479	3 140	7 291	122 343	639 055
Producing establishments	19	14	D	D	D	D	D	D
Mines or wells only	7	3	D	D	D	D	D	D
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	7	3	D	D	D	D	D	D
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	12	11	3 442	153 346	2 810	6 697	111 840	595 263
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	12	11	3 442	153 346	2 810	6 697	111 840	595 263
Combination mines or other types of mines	—	—	—	—	—	—	—	—
Separately operated preparation plants	—	—	—	—	—	—	—	—
Undistributed ¹	—	—	—	—	—	—	—	—
Nonproducing establishments	1	—	D	D	D	D	D	D

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997		1992			
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212392	Phosphate rock #	X	X	1 006 370	X	X	1 193 904
2123921	Crude phosphate rock (ore or matrix)	X	X	55 888	X	X	15 014
21239211	Crude phosphate rock (ore or matrix)	X	X	55 888	N	N	N
2123921100	Crude phosphate rock (ore or matrix)	162.3	4.3	55 888	N	N	N
2123923	Prepared phosphate rock	X	X	950 482	X	X	1 178 158
21239231	Prepared phosphate rock	X	X	950 482	N	N	N
2123923111	Washed and concentrated phosphate rock shipments	D	D	D	N	N	N
2123923131	Dried, calcined, sintered, or nodulized phosphate rock	D	D	D	13.1	13.5	383 835
212392W	Phosphate rock, nsk	X	X	—	X	X	732
212392WYWT	Phosphate rock, nsk #	X	X	—	X	X	732

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2123921	CRUDE PHOSPHATE ROCK (ORE OR MATRIX)		
	United States	55 888	15 014
2123923	PREPARED PHOSPHATE ROCK		
	United States	950 482	1 178 158
	Florida	740 409	916 907

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212392	PHOSPHATE ROCK MINING				
	SUPPLIES CONSUMED BY TYPE				
21239003	Crude minerals received for preparation mil metric tons (dry basis) ..	-	-	D	D
21239005	Crude minerals mined and prepared at same establishment mil metric tons (dry basis) ..	157.6	X	149.2	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	98 240	X	113 623
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	104 313	X	60 014
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	33 257	X	33 450
32592001	Explosive materials (including ammonium nitrate) and blasting accessories	X	D	X	D
33120059	Steel shapes and forms, except castings and forgings	X	D	X	D
00970098	All other supplies	X	49 898	X	49 458
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	325	X	284
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons ..	D	D	D	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels ..	315.1	10 305	D	D
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel	108.6	2 391	D	D
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft ..	0.7	2 202	2.1	5 980
32411015	Gasoline used as a fuel	1.4	1 520	2.8	2 789
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	1 195	X	D
00974000	Undistributed fuels#	X	D	X	90

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212392 PHOSPHATE ROCK MINING

This U.S. industry comprises establishments primarily engaged in developing the mine site, mining, milling, and/or drying or otherwise beneficiating (i.e., preparing) phosphate rock.

The data published with NAICS code 212392 include the following SIC industry:

1475 Phosphate rock

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 212392	In 1997 the quantity and value of net shipments represented by gross shipments less minerals received for preparation were 42.3 million metric tons and 1,006.4 million dollars.
# 212392WYWT	Includes value for establishments that did not report report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents.

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents costs for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents costs for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325W	14590	14590
2121133	12312	12312	212291WYWT	1094000	1094000	212325WYWT	1459000	1459000
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14741
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14742
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14744
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474100
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474200
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474400
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913	14743	14743
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913111	1474301	1474301
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913121	1474303	1474303
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913YVW	14743XX	14743XX
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391W	14740	14740
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391WYWT	1474000	1474000
2122103131	1011207	1011207	212299W pt.	1099000 pt	1099000 pt	2123921	14751	14751
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
212210W	10110	10110	212310	14110	14110	2123921100 pt	1475100 pt	1475103
212210WYWT	1011000	1011000	2123101011	1411011	1411011	2123921100 pt	1475100 pt	1475105
2122211	10411	10411	2123101021	1411015	1411015	2123923	14752	14752
2122211111	1041104	1041104	2123101021	1411019	1411019	2123923111 pt	1475202 pt	1475201
2122211121	1041121	1041121	2123101031	1411019	1411019	2123923111 pt	1475202 pt	1475203
2122211131	1041123	1041123	21231010YWT	1411000	1411000	2123923111 pt	1475202 pt	1475205
2122211YVW	10411XX	10411XX	2123120	14220	14220	2123923131	1475207	1475207
2122213	10412	10412	2123120100	1422000	1422000	2123923YVW	14752XX	14752XX
2122213100	1041200	1041200	2123120YWT	14220XX	14220XX	212392W	14750	14750
2122215	10413	10413	2123130	14230	14230	212392WYWT	1475000	1475000
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931	14791	14791
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123931100	1479100	1479100
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933	14793	14793
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123933100	1479300	1479300
212221WYWT	1041000	1041000	2123190 pt.	1499A pt	14992 pt	2123935	14794	14794
2122221	10441	10441	2123190111	1499A22	1499200 pt	2123935100	1479400	1479400
2122221111	1044104	1044104	2123190121	1429000	1429000	2123939	14798	14798
2122221121	1044121	1044121	2123190YWT pt	14290XX	14290XX	2123939100	1479800	1479800
2122221131	1044123	1044123	2123211	14421	14421	212393W	14790	14790
2122221YVW	10441XX	10441XX	2123211111	1442101	1442101	212393WYWT	1479000	1479000
2122223	10442	10442	2123211121	1442105	1442105	2123991	14996	14996
2122223100	1044200	1044200	2123211YVW	14421XX	14421XX	2123991100	1499600	1499600
2122225	10443	10443	2123213	14422	14422	2123993	14997	14997
2122225111	1044303	1044303	2123213111	1442201	1442201	2123993100 pt	1499701 pt	1499712
2122225121	1044307	1044307	2123213221	1442205	1442205	2123993100 pt	1499701 pt	1499722
2122225YVW	10443XX	10443XX	2123213YVW	14422XX	14422XX	2123995	14998	14998
212222W	10440	10440	212321W	14420	14420	2123995100 pt	1499801 pt	1499812
212222WYWT	1044000	1044000	212321WYWT	1442000	1442000	2123995100 pt	1499801 pt	1499822
2122311	10311	10311	2123221	14461	14461	2123999 pt.	1499A pt	14991
2122311111	1031104	1031104	2123221100	1446100	1446100	2123999 pt.	1499A pt	14992 pt
2122311121	1031121	1031121	2123223	14465	14465	2123999 pt.	1499A pt	14993
2122311131	1031123	1031123	2123223100	1446500	1446500	2123999 pt.	1499A pt	14994
2122311YVW	10311XX	10311XX	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122313	10312	10312	2123229100	1446900	1446900			
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Other Chemical and Fertilizer Mineral Mining

1997

Issued November 1999

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212393	Other chemical & fertilizer mineral mining	41	50	2 177	88 608	1 585	3 302	61 203	240 278	147 217	362 987	24 508
147900	Chemical & fertilizer mineral mining, n.e.c.	N	50	2 177	88 608	1 585	3 302	61 203	240 278	147 217	362 987	24 508

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212393, OTHER CHEMICAL & FERTILIZER MINERAL MINING												
United States	-	50	18	2 177	88 608	1 585	3 302	61 203	240 278	147 217	362 987	24 508

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212393, OTHER CHEMICAL & FERTILIZER MINERAL MINING		212393, OTHER CHEMICAL & FERTILIZER MINERAL MINING—Con.	
Companies ¹	41	Value of primary products shipments or services produced in all industries	\$1,000.. 355 159
All establishments	50	Value of primary products shipments or services produced in this industry	\$1,000.. 353 254
Establishments with 0 to 19 employees	32	Value of primary products shipments or services produced in other industries	\$1,000.. 1 905
Establishments with 20 to 99 employees	10	Value added by mining	\$1,000.. 240 278
Establishments with 100 employees or more	8	Total inventories, end of 1996	\$1,000.. 47 377
All employees for pay period including March 12	2 177	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. 32 939
Annual payroll	88 608	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 14 438
Annual fringe benefits not included in payroll	25 007	Total inventories, end of 1997	\$1,000.. 51 678
Production, development, and exploration workers for pay period including March 12	1 585	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. 34 810
Production, development, and exploration worker annual hours	3 302	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 16 868
Production, development, and exploration worker annual wages	61 203	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 1 004 458
Total cost of supplies	147 217	Capital expenditures (except land and mineral rights)	\$1,000.. 24 508
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 63 991	and equipment (new and used)	\$1,000.. D
Cost of resales	\$1,000.. D	Capital expenditures for mineral exploration and development	\$1,000.. D
Cost of purchased fuels consumed	\$1,000.. 34 248	Capital expenditures for mineral land and rights	\$1,000.. 129
Cost of purchased electricity	13 535	Deductions from depreciable/depletable assets during year	\$1,000.. 9 865
Cost of contract work	\$1,000.. D	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 1 019 230
Quantity of electricity purchased	212 685	Total depreciation/depletion charges during year	\$1,000.. 34 475
Quantity of electricity generated less sold	D	Total rental payments during year	\$1,000.. 5 163
Cost of purchased communications services	740	Rental payments for buildings and other structures	\$1,000.. 684
Total value of shipments and receipts	\$1,000.. 362 987	Rental payments for machinery and equipment	\$1,000.. 4 479
Primary products value of shipments	\$1,000.. 353 254	Lease rents	\$1,000.. D
Secondary products value of shipments and receipts for services	\$1,000.. D	Expensed mineral exploration, development, land, and rights	\$1,000.. D
Value of resales	\$1,000.. D		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212393, OTHER CHEMICAL & FERTILIZER MINERAL MINING												
All establishments	—	50	18	2 177	88 608	1 585	3 302	61 203	240 278	147 217	362 987	24 508
Establishments with 0 to 4 employees	9	20	—	51	1 335	33	58	990	5 157	2 572	7 450	279
Establishments with 5 to 9 employees	2	7	—	43	1 486	33	72	1 006	7 312	3 301	9 907	706
Establishments with 10 to 19 employees	2	5	—	60	1 463	47	96	974	3 449	4 512	7 220	741
Establishments with 20 to 49 employees	—	5	5	133	5 428	71	148	2 543	9 121	4 057	12 634	544
Establishments with 50 to 99 employees	1	5	5	320	11 002	235	456	6 728	28 957	7 193	33 989	2 161
Establishments with 100 to 249 employees	—	8	8	1 570	67 894	1 166	2 472	48 962	186 282	125 582	291 787	20 077
Establishments with 250 to 499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	25	—	109	2 844	81	141	2 115	5 665	3 272	8 100	837

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212393, OTHER CHEMICAL & FERTILIZER MINERAL MINING								
All establishments	50	18	2 177	88 608	1 585	3 302	61 203	240 278
Producing establishments	49	17	D	D	D	D	D	D
Mines or wells only	37	5	D	D	D	D	D	D
Underground mines	3	3	D	D	D	D	D	D
Open-pit mines	34	2	D	D	D	D	D	D
Combination mines, well operations, or other types of mines	-	-	-	-	-	-	-	-
Mines with preparation plants	12	12	1 439	56 535	1 053	2 292	39 879	146 969
Underground mines	6	6	968	35 735	669	1 484	22 827	93 059
Open-pit mines	3	3	D	D	D	D	D	D
Combination mines or other types of mines	3	3	D	D	D	D	D	D
Separately operated preparation plants	-	-	-	-	-	-	-	-
Undistributed ¹	-	-	-	-	-	-	-	-
Nonproducing establishments	1	1	D	D	D	D	D	D

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212393	Other chemical and fertilizer minerals	X	X	355 159	X	X	410 875
2123931	Barite	X	X	D	X	X	12 969
21239311	Barite	X	X	D	X	X	N
2123931100	Barite	D	D	D	157.4	143.4	12 969
2123933	Rock salt	X	X	220 846	X	X	198 488
21239331	Rock salt	X	X	220 846	X	X	N
2123933100	Rock salt #	X	12 585.2	220 846	X	11 852.0	198 488
2123935	Native sulfur	X	X	D	X	X	146 980
21239351	Native sulfur	X	X	D	X	X	N
2123935100	Native sulfur	D	D	D	2 446.6	2 464.1	146 980
2123939	Other chemical and fertilizer minerals	X	X	D	X	X	39 057
21239391	Other chemical and fertilizer minerals	X	X	D	X	X	N
2123939100	Other chemical and fertilizer minerals #	X	X	D	X	X	39 057
212393W	Chemical and fertilizer mining, nsk	X	X	D	X	X	13 381
212393WY	Chemical and fertilizer mining, nsk	X	X	D	X	X	N
212393WYWT	Chemical and fertilizer mining, nsk #	X	X	D	X	X	13 381

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2123931	BARITE		
	United States	D	12 969
2123933	ROCK SALT		
	United States	220 846	198 488
2123935	NATIVE SULFUR		
	United States	D	146 980
2123939	OTHER CHEMICAL AND FERTILIZER MINERALS		
	United States	D	39 057

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212393	OTHER CHEMICAL & FERTILIZER MINERAL MINING				
	SUPPLIES CONSUMED BY TYPE				
21239003	Crude minerals received for preparation mil metric tons (dry basis) . .	D	D	D	D
21239005	Crude minerals mined and prepared at same establishment mil metric tons (dry basis) . .	15.2	X	12.0	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	9 404	X	102 139
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	11 615	X	5 713
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	D	X	6 953
32592001	Explosive materials (including ammonium nitrate) and blasting accessories	X	3 932	X	3 952
33120059	Steel shapes and forms, except castings and forgings	X	D	X	3 999
00970098	All other supplies	X	16 469	X	33 749
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	D	X	D
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel 1,000 s tons . .	-	-	D	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel 1,000 barrels . .	D	D	32.5	992
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel 1,000 barrels . .	D	D	41.3	1 349
21111015	Gas (natural, manufactured, and mixed) used as a fuel bil cu ft . .	D	D	24.6	45 128
32411015	Gasoline used as a fuel mil gal . .	D	D	0.3	276
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	D	X	D
00974000	Undistributed fuels#	X	D	X	721

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212393 OTHER CHEMICAL AND FERTILIZER MINERAL MINING

This U.S. industry comprises establishments primarily engaged in developing the mine site, mining, milling, and/or drying or otherwise beneficiating (i.e., preparing) chemical or fertilizer mineral raw materials (except potash, soda, boron, and phosphate rock).

The data published with NAICS code 212393 include the following SIC industry:

1479 Chemical and fertilizer mineral mining, n.e.c.

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Mining did not fully implement the conversion to NAICS. Data for NAICS industry 212393 do not include establishments only engaged in beneficiating or preparing chemical and fertilizer minerals. The NAICS definitions will be fully implemented with the 2002 Economic Census.

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2123933100	Includes some rock salt shipped as brine.
# 2123939100	Represents pyrites and such other miscellaneous chemical and fertilizer minerals as fluorspar, spodumene, lithium carbonate, wollastonite, natural wollastonite, and natural iron oxide pigments.
# 212393WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G. Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14551
2121113111	1221201	1221201	2122343	10212	10212	2123240 pt.	14552 pt	14552
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455100 pt
2121113331	1221218	1221218	2122345	10213	10213	2123240111 pt	1455211 pt	1455201
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455100 pt
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240121 pt	1455212 pt	1455202
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123240YWT	1455000	1455000
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251	14591	14591
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123251100	1459100	1459100
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253	14592	14592
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459211
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123253100 pt	1459200 pt	1459221
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255	14593	14593
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123221	1222217	1222217	2122911	10941	10941	2123257	14596	14596
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123257100	1459600	1459600
212112W	12220	12220	2122913	10942	10942	2123258	14597	14597
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258111	1459711	1459711
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258121	1459721	1459721
2121131111	1231101	1231101	2122913121	1094205	1094205	2123258YVW	14597XX	14597XX
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259	14599	14599
2121131YVW	12311XX	12311XX	212291W	10940	10940	2123259100	1459900	1459900
2121133	12312	12312	212291WYWT	1094000	1094000	212325W	14590	14590
2121133111	1231201	1231201	2122991	10992	10992	212325WYWT	1459000	1459000
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14741
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14742
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911 pt.	14745 pt	14744
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474100
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474200
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123911100 pt	1474500 pt	1474400
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913	14743	14743
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913111	1474301	1474301
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913121	1474303	1474303
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	2123913YVW	14743XX	14743XX
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391W	14740	14740
2122103131	1011207	1011207	212299W pt.	10990 pt	10997 pt	212391WYWT	1474000	1474000
2122103YVW	10112XX	10112XX	212299WYWT pt	1099000 pt	1099700	2123921	14751	14751
212210W	10110	10110	212299WYWT pt	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
212210WYWT	1011000	1011000	2123110	14110	14110	2123921100 pt	1475100 pt	1475103
2122211	10411	10411	2123110111	1411011	1411011	2123923	14752	14752
2122211111	1041104	1041104	2123110121	1411015	1411015	2123923111 pt	1475202 pt	1475201
2122211121	1041121	1041121	2123110221	1411019	1411019	2123923111 pt	1475202 pt	1475203
2122211131	1041123	1041123	2123110YWT	1411000	1411000	2123923111 pt	1475202 pt	1475205
2122211YVW	10411XX	10411XX	2123120	14220	14220	2123923131	1475207	1475207
2122213	10412	10412	2123120100	1422000	1422000	2123923YVW	14752XX	14752XX
2122213100	1041200	1041200	2123120YWT	14220XX	14220XX	212392W	14750	14750
2122215	10413	10413	2123130	14230	14230	212392WYWT	1475000	1475000
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931	14791	14791
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123931100	1479100	1479100
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933	14793	14793
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123933100	1479300	1479300
212221WYWT	1041000	1041000	2123190 pt.	1499A pt	14992 pt	2123935	14794	14794
2122221	10441	10441	2123190111	1499A22	1499200 pt	2123935100	1479400	1479400
2122221111	1044104	1044104	2123190121	1429000	1429000	2123939	14798	14798
2122221121	1044121	1044121	2123190YWT pt	14290XX	14290XX	2123939100	1479800	1479800
2122221131	1044123	1044123	2123211	14421	14421	212393W	14790	14790
2122221YVW	10441XX	10441XX	2123211111	1442101	1442101	212393WYWT	1479000	1479000
2122223	10442	10442	2123211121	1442105	1442105	2123991	14996	14996
2122223100	1044200	1044200	2123211YVW	14421XX	14421XX	2123991100	1499600	1499600
2122225	10443	10443	2123213	14422	14422	2123993	14997	14997
2122225111	1044303	1044303	2123213111	1442201	1442201	2123993100 pt	1499701 pt	1499712
2122225121	1044307	1044307	2123213221	1442205	1442205	2123993100 pt	1499701 pt	1499722
2122225YVW	10443XX	10443XX	2123213YVW	14422XX	14422XX	2123995	14998	14998
212222W	10440	10440	212321W	14420	14420	2123995100 pt	1499801 pt	1499812
212222WYWT	1044000	1044000	212321WYWT	1442000	1442000	2123995100 pt	1499801 pt	1499822
2122311	10311	10311	2123221	14461	14461	2123999 pt.	1499A pt	14991
2122311111	1031104	1031104	2123221100	1446100	1446100	2123999 pt.	1499A pt	14992 pt
2122311121	1031121	1031121	2123223	14465	14465	2123999 pt.	1499A pt	14993
2122311131	1031123	1031123	2123223100	1446500	1446500	2123999 pt.	1499A pt	14994
2122311YVW	10311XX	10311XX	2123229	14469	14469	2123999 pt.	1499A pt	14995
2122313	10312	10312	2123229100	1446900	1446900			
2122313111	1031201	1031201						
2122313121	1031221	1031221						
2122313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

All Other Nonmetallic Mineral Mining

1997

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
212399	All other nonmetallic mineral mining	178	209	3 953	136 942	3 014	6 175	97 009	447 183	267 842	612 645	102 380
149920	Miscellaneous nonmetallic minerals, except fuels (pt)	N	209	3 953	136 942	3 014	6 175	97 009	447 183	267 842	612 645	102 380

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	
	E ¹	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)					Annual wages (\$1,000)
212399, ALL OTHER NONMETALLIC MINERAL MINING												
United States	-	209	56	3 953	136 942	3 014	6 175	97 009	447 183	267 842	612 645	102 380
Florida	-	14	4	190	6 031	103	179	2 876	16 258	6 942	21 199	2 001
Nevada	-	9	4	334	11 126	212	474	6 409	37 907	21 215	57 892	1 230

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
212399, ALL OTHER NONMETALLIC MINERAL MINING		212399, ALL OTHER NONMETALLIC MINERAL MINING—Con.	
Companies ¹ number..	178	Value of primary products shipments or services produced in all industries..... \$1,000..	636 366
All establishments number..	209	Value of primary products shipments or services produced in this industry..... \$1,000..	584 166
Establishments with 0 to 19 employees..... number..	153	Value of primary products shipments or services produced in other industries..... \$1,000..	52 200
Establishments with 20 to 99 employees..... number..	50	Value added by mining..... \$1,000..	447 183
Establishments with 100 employees or more..... number..	6	Total inventories, end of 1996..... \$1,000..	88 761
All employees for pay period including March 12..... number..	3 953	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996..... \$1,000..	57 874
Annual payroll..... \$1,000..	136 942	Supplies, parts, fuels, etc., inventories, end of 1996..... \$1,000..	30 887
Annual fringe benefits not included in payroll..... \$1,000..	38 283	Total inventories, end of 1997..... \$1,000..	94 373
Production, development, and exploration workers for pay period including March 12..... number..	3 014	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997..... \$1,000..	61 695
Production, development, and exploration worker annual hours..... 1,000..	6 175	Supplies, parts, fuels, etc., inventories, end of 1997..... \$1,000..	32 678
Production, development, and exploration worker annual wages..... \$1,000..	97 009	Gross book value of depreciable/depletable assets at beginning of year..... \$1,000..	763 655
Total cost of supplies..... \$1,000..	267 842	Capital expenditures (except land and mineral rights)..... \$1,000..	102 380
Cost of supplies used, minerals received, and purchased machinery installed..... \$1,000..	186 052	Capital expenditures for buildings, structures, machinery, and equipment (new and used)..... \$1,000..	91 787
Cost of resales..... \$1,000..	7 438	Capital expenditures for mineral exploration and development..... \$1,000..	10 593
Cost of purchased fuels consumed..... \$1,000..	27 841	Capital expenditures for mineral land and rights..... \$1,000..	432
Cost of purchased electricity..... \$1,000..	25 740	Deductions from depreciable/depletable assets during year..... \$1,000..	12 894
Cost of contract work..... \$1,000..	20 771	Gross book value of depreciable/depletable assets at end of year..... \$1,000..	853 573
Quantity of electricity purchased..... 1,000 kWh..	417 239	Total depreciation/depletion charges during year..... \$1,000..	49 540
Quantity of electricity generated less sold..... 1,000 kWh..	479	Total rental payments during year..... \$1,000..	7 269
Cost of purchased communications services..... \$1,000..	1 268	Rental payments for buildings and other structures..... \$1,000..	1 122
Total value of shipments and receipts..... \$1,000..	612 645	Rental payments for machinery and equipment..... \$1,000..	6 147
Primary products value of shipments..... \$1,000..	584 166	Lease rents..... \$1,000..	3 346
Secondary products value of shipments and receipts for services..... \$1,000..	20 377	Expensed mineral exploration, development, land, and rights..... \$1,000..	17 940
Value of resales..... \$1,000..	8 102		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	
	E ¹	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)					Annual wages (\$1,000)
212399, ALL OTHER NONMETALLIC MINERAL MINING												
All establishments.....	—	209	56	3 953	136 942	3 014	6 175	97 009	447 183	267 842	612 645	102 380
Establishments with 0 to 4 employees.....	4	83	—	188	3 917	137	213	2 935	12 647	7 021	18 520	1 148
Establishments with 5 to 9 employees.....	4	34	—	220	6 753	182	340	5 171	18 319	9 426	24 638	3 107
Establishments with 10 to 19 employees.....	2	36	—	468	13 339	360	681	9 654	39 557	16 805	52 009	4 353
Establishments with 20 to 49 employees.....	1	37	37	1 114	35 088	829	1 614	24 080	108 160	57 332	141 447	24 045
Establishments with 50 to 99 employees.....	—	13	13	859	30 448	688	1 513	22 506	98 656	47 113	134 295	11 474
Establishments with 100 to 249 employees.....	—	5	5	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees.....	—	1	1	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees.....	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees.....	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more.....	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	40	—	166	3 940	127	208	2 894	9 465	5 247	13 430	1 282

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
212399, ALL OTHER NONMETALLIC MINERAL MINING								
All establishments	209	56	3 953	136 942	3 014	6 175	97 009	447 183
Producing establishments	205	56	3 929	136 030	2 996	6 139	96 331	448 372
Mines or wells only	8	2	127	4 420	85	160	2 883	23 296
Underground mines	1	—	D	D	D	D	D	D
Open-pit mines	7	2	D	D	D	D	D	D
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	194	54	3 790	131 225	2 902	5 962	93 181	424 020
Underground mines	5	1	111	4 181	75	164	2 770	9 604
Open-pit mines	185	51	3 598	124 633	2 769	5 697	88 889	405 647
Combination mines or other types of mines	4	2	81	2 411	58	101	1 522	8 769
Separately operated preparation plants	—	—	—	—	—	—	—	—
Undistributed ¹	3	—	12	385	9	17	267	1 056
Nonproducing establishments	4	—	24	912	18	36	678	S

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
212399	All other nonmetallic minerals	X	X	636 366	X	X	N
2123991	Diatomite, crude and prepared	X	X	128 891	X	X	139 317
21239911	Diatomite, crude and prepared	X	X	128 891	X	X	N
2123991100	Diatomite, crude and prepared	768.3	687.4	128 891	609.9	568.0	139 317
2123993	Gypsum #	X	X	66 131	X	X	N
21239931	Gypsum	X	X	66 131	X	X	N
2123993100	Gypsum #	18.1	7.0	66 131	N	N	N
2123995	Talc, soapstone, and pyrophyllite	X	X	95 630	X	X	N
21239951	Talc, soapstone, and pyrophyllite	X	X	95 630	X	X	N
2123995100	Talc, soapstone, and pyrophyllite #	1 169.5	1 084.1	95 630	N	N	N
2123999	Other nonmetallic minerals	X	X	301 998	X	X	N
21239991	Other nonmetallic minerals	X	X	301 998	X	X	N
2123999111	Mica	111.6	108.1	9 374	132.8	132.9	21 310
2123999121	Native asphalt and bitumens (except bituminous limestone and bituminous sandstone) #	448.4	448.5	19 044	N	N	N
2123999131	Pumice and pumicite #	662.2	687.1	20 314	1 036.6	934.6	26 036
2123999141	Natural abrasives, except sand	55.1	56.2	21 987	70.3	68.0	18 684
2123999151	Peat	459.1	402.8	12 850	532.4	511.5	15 777
2123999161	Perlite	840.5	811.7	34 844	755.5	637.7	22 184
2123999171	Shell, crushed or broken #	1 943.0	1 870.4	10 840	5 480.0	5 041.5	29 925
2123999191	All other nonmetallic minerals #	X	X	172 745	X	X	N
212399W	Miscellaneous nonmetallic minerals, nsk	X	X	43 716	X	X	N
212399WY	Miscellaneous nonmetallic minerals, nsk	X	X	43 716	X	X	N
212399WYWT	Miscellaneous nonmetallic minerals, nsk #	X	X	43 716	X	X	N

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2123991	DIATOMITE, CRUDE AND PREPARED		
	United States	128 891	139 317
2123993	GYPSUM #		
	United States	66 131	N
	Nevada	3 057	N
2123995	TALC, SOAPSTONE, AND PYROPHYLLITE		
	United States	95 630	N
2123999	OTHER NONMETALLIC MINERALS		
	United States	301 998	N
	Florida	22 038	N

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
212399	ALL OTHER NONMETALLIC MINERAL MINING				
	SUPPLIES CONSUMED BY TYPE				
21239003	Crude minerals received for preparation	0.2	3 132	N	N
21239005	Crude minerals mined and prepared at same establishment	10.3	X	N	X
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	75 478	X	N
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	19 059	X	N
32500073	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories	X	4 642	X	N
32592001	Explosive materials (including ammonium nitrate) and blasting accessories	X	1 465	X	N
33120059	Steel shapes and forms, except castings and forgings	X	877	X	N
00970098	All other supplies	X	53 687	X	N
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	27 712	X	N
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel	D	D	N	N
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel	174.1	6 116	N	N
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel	54.6	1 199	N	N
21111015	Gas (natural, manufactured, and mixed) used as a fuel	3.6	10 795	N	N
32411015	Gasoline used as a fuel	1.2	1 299	N	N
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	D	X	N
00974000	Undistributed fuels#	X	7 121	X	N

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

212399 ALL OTHER NONMETALLIC MINERAL MINING

This U.S. industry comprises establishments primarily engaged in developing the mine site, mining and/or milling or otherwise beneficiating (i.e., preparing) nonmetallic minerals (except stone, sand, gravel, clay, ceramic, refractory minerals, chemical and fertilizer minerals).

The data published with NAICS code 212399 include the following SIC industry:

1499 Miscellaneous nonmetallic minerals, except fuels (pt)

This definition comes from the 1997 NAICS Manual. However, for this industry, the 1997 Economic Census – Mining did not fully implement the conversion to NAICS. Data for NAICS industry 212399 do not include establishments only engaged in beneficiating or preparing miscellaneous nonmetallic minerals. The NAICS definitions will be fully implemented with the 2002 Economic Census.

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2123993.....	Excludes quantity and value of crushed, ground, screened, or dried gypsum processed in manufacturing establishments without mines.
# 2123993100	Quantity of production for all purposes includes gypsum mined and used in the same establishment manufacturing gypsum products.
# 2123995100	Excludes data for prepared talc, soapstone, and pyrophyllite produced at establishments classified in manufacturing industries.
# 2123999121	Includes gilsonite.
# 2123999131	Includes volcanic ash and scoria.
# 2123999171	Excludes production and shipments of shell produced and used by establishments primarily classified in construction or manufacturing industries, such as those producing cement or concrete products.
# 2123999191	Represents other miscellaneous nonmetallic minerals, such as vermiculite, gem stones, wollastonite, etc.
# 212399WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes:

1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2121111	12211	12211	2122341	10211	10211	212322W	14460	14460
212111111	1221101	1221101	2122341111	1021104	1021104	212322WYWT	1446000	1446000
212111221	1221103	1221103	2122341121	1021121	1021121	2123240 pt.	14550	14550
212111YVW	12211XX	12211XX	2122341131	1021123	1021123	2123240 pt.	14552 pt	14551
2121113	12212	12212	2122341YVW	10211XX	10211XX	2123240 pt.	14552 pt	14552
2121113111	1221201	1221201	2122343	10212	10212	2123240111 pt	1455211 pt	1455100 pt
2121113221	1221217	1221217	2122343100	1021200	1021200	2123240111 pt	1455211 pt	1455201
2121113331	1221218	1221218	2122345	10213	10213	2123240121 pt	1455212 pt	1455100 pt
2121113441	1221219	1221219	2122345111	1021301	1021301	2123240121 pt	1455212 pt	1455202
2121113YVW	12212XX	12212XX	2122345121	1021303	1021303	2123240YWT	1455000	1455000
212111W	12210	12210	2122345YVW	10213XX	10213XX	2123251	14591	14591
212111WYWT	1221000	1221000	212234W pt.	10210	10210	2123251100	1459100	1459100
2121121	12221	12221	212234W pt.	10990 pt	10990 pt	2123253	14592	14592
2121121111	1222101	1222101	212234W pt.	10997 pt	10997 pt	2123253100 pt	1459200 pt	1459211
2121121221	1222103	1222103	212234WYWT pt	1021000	1021000	2123253100 pt	1459200 pt	1459221
2121121YVW	12221XX	12221XX	212234WYWT pt	1099000 pt	1099000 pt	2123255	14593	14593
2121123	12222	12222	212234WYWT pt	1099733 pt	1099733 pt	2123255100	1459300	1459300
2121123111	1222201	1222201	212234WYWT pt	1099733 pt	1099729 pt	2123257	14596	14596
2121123221	1222217	1222217	2122911	10941	10941	2123257100	1459600	1459600
2121123YVW	12222XX	12222XX	2122911100	1094102	1094102	2123258	14597	14597
212112W	12220	12220	2122913	10942	10942	2123258111	1459711	1459711
212112WYWT	1222000	1222000	2122913111 pt	1094201 pt	1094203	2123258121	1459721	1459721
2121131	12311	12311	2122913111 pt	1094201 pt	1094204	2123258YVW	14597XX	14597XX
2121131111	1231101	1231101	2122913121	1094205	1094205	2123259	14599	14599
2121131121	1231103	1231103	2122913YVW	10942XX	10942XX	2123259100	1459900	1459900
2121131YVW	12311XX	12311XX	212291W	10940	10940	212325W	14590	14590
2121133	12312	12312	212291WYWT	1094000	1094000	212325WYWT	1459000	1459000
2121133111	1231201	1231201	2122991	10992	10992	2123911 pt.	14745 pt	14741
2121133121	1231217	1231217	2122991100 pt	1099200 pt	1099211	2123911 pt.	14745 pt	14742
2121133YVW	12312XX	12312XX	2122991100 pt	1099200 pt	1099221	2123911 pt.	14745 pt	14744
212113W	12310	12310	2122993	10997 pt	10997 pt	2123911100 pt	1474500 pt	1474100
212113WYWT	1231000	1231000	2122993111	1099701	1099711 pt	2123911100 pt	1474500 pt	1474200
2122101	10111	10111	2122993121	1099731	1099731	2123911100 pt	1474500 pt	1474400
2122101111	1011121	1011121	2122993131	1099732	1099729 pt	2123913	14743	14743
2122101121	1011123	1011123	2122993YVW	10997XX	10997XX	2123913111	1474301	1474301
2122101YVW	10111XX	10111XX	2122995	10998	10998	2123913121	1474303	1474303
2122103	10112	10112	2122995100 pt	1099800 pt	1099811	2123913YVW	14743XX	14743XX
2122103111	1011203	1011203	2122995100 pt	1099800 pt	1099821	212391W	14740	14740
2122103121	1011205	1011205	212299W pt.	10990 pt	10990 pt	212391WYWT	1474000	1474000
2122103131	1011207	1011207	212299W pt.	1099000 pt	1099000 pt	2123921	14751	14751
2122103YVW	10112XX	10112XX	212299WYWT pt.	1099000 pt	1099700	2123921100 pt	1475100 pt	1475101
212210W	10110	10110	212310	14110	14110	2123921100 pt	1475100 pt	1475103
212210WYWT	1011000	1011000	2123101011	1411011	1411011	2123923	14752	14752
2122211	10411	10411	2123101021	1411015	1411015	2123923111 pt	1475202 pt	1475201
2122211111	1041104	1041104	2123101031	1411019	1411019	2123923111 pt	1475202 pt	1475203
2122211121	1041121	1041121	21231010YWT	1411000	1411000	2123923111 pt	1475202 pt	1475205
2122211131	1041123	1041123	2123120	14220	14220	2123923131	1475207	1475207
2122211YVW	10411XX	10411XX	2123120100	1422000	1422000	2123923YVW	14752XX	14752XX
2122213	10412	10412	2123120YWT	14220XX	14220XX	212392W	14750	14750
2122213100	1041200	1041200	2123130	14230	14230	212392WYWT	1475000	1475000
2122215	10413	10413	2123130100	1423000	1423000	2123931	14791	14791
2122215111	1041303	1041303	2123130100	1423000	1423000	2123931100	1479100	1479100
2122215121	1041307	1041307	2123130YWT	14230XX	14230XX	2123933	14793	14793
2122215YVW	10413XX	10413XX	2123190 pt.	14290	14290	2123933100	1479300	1479300
212221W	10410	10410	2123190 pt.	14990 pt	14990 pt	2123935	14794	14794
212221WYWT	1041000	1041000	2123190 pt.	1499A pt	14992 pt	2123935100	1479400	1479400
2122221	10441	10441	2123190111	1499A22	1499200 pt	2123939	14798	14798
2122221111	1044104	1044104	2123190121	1429000	1429000	2123939100	1479800	1479800
2122221121	1044121	1044121	2123190YWT pt	14290XX	14290XX	212393W	14790	14790
2122221131	1044123	1044123	2123190YWT pt	1499000 pt	1499000 pt	212393WYWT	1479000	1479000
2122221YVW	10441XX	10441XX	2123211	14421	14421	2123991	14996	14996
2122223	10442	10442	2123211111	1442101	1442101	2123991100	1499600	1499600
2122223100	1044200	1044200	2123211121	1442105	1442105	2123993	14997	14997
2122225	10443	10443	2123211YVW	14421XX	14421XX	2123993100 pt	1499701 pt	1499712
2122225111	1044303	1044303	2123213	14422	14422	2123993100 pt	1499701 pt	1499722
2122225121	1044307	1044307	2123213111	1442201	1442201	2123995	14998	14998
2122225YVW	10443XX	10443XX	2123213221	1442205	1442205	2123995100 pt	1499801 pt	1499812
212222W	10440	10440	2123213YVW	14422XX	14422XX	2123999 pt.	1499A pt	14992 pt
212222WYWT	1044000	1044000	212321W	14420	14420	2123999 pt.	1499A pt	14993
2122231	10311	10311	212321WYWT	1442000	1442000	2123999 pt.	1499A pt	14994
2122231111	1031104	1031104	2123221	14461	14461	2123999 pt.	1499A pt	14995
21222311121	1031121	1031121	2123221100	1446100	1446100	2123223	14465	14465
21222311131	1031123	1031123	2123223	14465	14465	2123223100	1446500	1446500
2122231YVW	10311XX	10311XX	2123223100	1446500	1446500	2123229	14469	14469
21222313	10312	10312	2123229100	1446900	1446900	2123229100	1446900	1446900
21222313111	1031201	1031201						
21222313121	1031221	1031221						
21222313YVW	10312XX	10312XX						
212231W	10310	10310						
212231WYWT	1031000	1031000						

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2123999 pt.....	1499A pt.....	14999	2123999161	1499A05	1499905	212399W pt.....	14990 pt.....	14990 pt
2123999111	1499A10	1499100	2123999171	1499A07	1499907	212399W pt.....	14990 pt.....	14997 pt
2123999121	1499A21	1499200 pt	2123999191 pt	1499A97 pt.....	1499901	212399W pt.....	14990 pt.....	14998 pt
2123999131	1499A30	1499300	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499000 pt
2123999141	1499A40	1499400	2123999191 pt	1499A97 pt.....	1499998	212399WYWT pt ...	1499000 pt.....	1499700
2123999151	1499A50	1499500	2123999YVW	1499AXX	1499AXX	212399WYWT pt ...	1499000 pt.....	1499800

Drilling Oil and Gas Wells

1997

Issued September 1999

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division	301-457-4673
Service Sector Statistics Division	301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Com-panies ¹	All estab-lish-ments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213111	Drilling oil & gas wells	1 371	1 638	53 865	1 918 086	45 219	92 059	1 539 296	5 729 222	3 797 268	7 317 963	2 209 300
138100	Drilling oil & gas wells	N	1 638	53 865	1 918 086	45 219	92 059	1 539 296	5 729 222	3 797 268	7 317 963	2 209 300

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expendi-tures (\$1,000)
		Total	With 20 em-ploy-ees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213111, DRILLING OIL & GAS WELLS												
United States	-	1 638	401	53 865	1 918 086	45 219	92 059	1 539 296	5 729 222	3 797 268	7 317 963	2 209 300
Alaska	-	11	8	1 023	54 802	791	1 772	46 364	111 571	172 031	131 868	151 734
California	3	60	21	2 298	80 326	1 890	4 083	60 974	159 207	143 649	207 136	95 735
Colorado	1	57	11	744	25 356	608	1 256	21 148	58 755	31 837	80 449	10 143
Illinois	2	42	2	238	4 342	198	309	3 736	10 196	2 748	11 519	1 425
Kansas	1	66	12	784	22 279	666	1 420	17 972	48 835	23 956	67 695	5 096
Kentucky	4	30	2	211	4 765	149	238	3 739	9 682	3 918	12 500	1 100
Michigan	3	33	8	549	15 408	419	814	12 639	32 155	13 588	42 007	3 736
Montana	-	16	6	388	13 813	343	733	12 232	37 459	23 964	50 753	10 670
Nebraska	1	13	1	111	2 708	96	169	2 327	3 415	4 205	7 029	591
New Mexico	-	54	22	1 961	63 618	1 656	3 272	50 768	126 534	84 441	176 403	34 572
North Dakota	-	17	3	468	15 474	441	918	14 412	40 628	28 041	52 166	16 503
Ohio	3	71	7	549	14 871	444	812	12 213	34 161	13 968	45 093	3 036
Oklahoma	-	164	39	3 680	104 911	3 109	6 184	88 959	274 266	175 718	358 628	91 356
Pennsylvania	2	43	6	451	12 180	365	714	10 051	32 355	14 088	43 205	3 238
Texas	-	448	116	14 322	480 677	12 347	24 101	388 445	1 208 934	738 467	1 578 173	369 930
Utah	1	31	9	444	15 146	397	819	12 893	33 237	16 262	41 839	7 660
Wyoming	-	49	17	1 607	60 058	1 394	2 785	54 361	158 209	78 984	201 460	35 733

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
213111, DRILLING OIL & GAS WELLS		213111, DRILLING OIL & GAS WELLS—Con.	
Companies ¹	number.. 1 371	Value of primary products shipments or services produced in all industries	\$1,000.. 7 350 113
All establishments	number.. 1 638	Value of primary products shipments or services produced in this industry	\$1,000.. 6 896 804
Establishments with 0 to 19 employees	number.. 1 237	Value of primary products shipments or services produced in other industries	\$1,000.. 453 309
Establishments with 20 to 99 employees	number.. 295	Value added by mining	\$1,000.. 5 729 222
Establishments with 100 employees or more	number.. 106	Total inventories, end of 1996	\$1,000.. 319 098
All employees for pay period including March 12	number.. 53 865	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. —
Annual payroll	\$1,000.. 1 918 086	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 319 098
Annual fringe benefits not included in payroll	\$1,000.. 442 108	Total inventories, end of 1997	\$1,000.. 336 286
Production, development, and exploration workers for pay period including March 12	number.. 45 219	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. —
Production, development, and exploration worker annual hours	1,000.. 92 059	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 336 286
Production, development, and exploration worker annual wages	\$1,000.. 1 539 296	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 8 557 716
Total cost of supplies	\$1,000.. 3 797 268	Capital expenditures (except land and mineral rights)	\$1,000.. 2 209 300
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 3 014 985	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 2 209 300
Cost of resales	\$1,000.. 45 742	Capital expenditures for mineral exploration and development	\$1,000.. —
Cost of purchased fuels consumed	\$1,000.. 245 532	Capital expenditures for mineral land and rights	\$1,000.. —
Cost of purchased electricity	\$1,000.. 16 600	Deductions from depreciable/depletable assets during year	\$1,000.. 385 444
Cost of contract work	\$1,000.. 474 409	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 10 381 572
Quantity of electricity purchased	1,000 kWh.. 235 719	Total depreciation/depletion charges during year	\$1,000.. 666 819
Quantity of electricity generated less sold	1,000 kWh.. D	Total rental payments during year	\$1,000.. 156 188
Cost of purchased communications services	\$1,000.. 25 462	Rental payments for buildings and other structures	\$1,000.. 35 757
Total value of shipments and receipts	\$1,000.. 7 317 963	Rental payments for machinery and equipment	\$1,000.. 120 431
Primary products value of shipments	\$1,000.. 6 896 804	Lease rents	\$1,000.. —
Secondary products value of shipments and receipts for services	\$1,000.. 373 807	Expensed mineral exploration, development, land, and rights	\$1,000.. —
Value of resales	\$1,000.. 47 352		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213111, DRILLING OIL & GAS WELLS												
All establishments	—	1 638	401	53 865	1 918 086	45 219	92 059	1 539 296	5 729 222	3 797 268	7 317 963	2 209 300
Establishments with 0 to 4 employees	6	825	—	1 948	37 636	1 313	1 969	28 711	83 618	38 228	107 828	14 090
Establishments with 5 to 9 employees	1	215	—	1 425	42 813	1 126	2 131	33 324	142 066	122 361	231 522	32 905
Establishments with 10 to 19 employees	2	197	—	2 758	82 125	2 233	4 413	65 091	212 264	79 034	254 782	36 516
Establishments with 20 to 49 employees	1	200	200	6 349	215 977	5 172	10 548	166 535	584 263	655 923	1 008 375	231 811
Establishments with 50 to 99 employees	—	95	95	6 739	238 299	5 730	11 641	191 277	529 611	504 056	785 804	247 863
Establishments with 100 to 249 employees	—	75	75	10 648	374 045	9 139	19 109	302 715	828 850	444 240	1 069 895	203 896
Establishments with 250 to 499 employees	—	10	10	3 133	121 816	2 760	6 137	104 348	404 046	171 953	435 178	140 821
Establishments with 500 to 999 employees	—	14	14	9 522	475 562	7 479	13 941	356 882	1 334 550	919 415	1 574 139	679 826
Establishments with 1,000 to 2,499 employees	—	6	6	D	D	D	D	D	D	D	D	D
Establishments with 2,500 employees or more	—	1	1	D	D	D	D	D	D	D	D	D
Administrative records ²	9	652	—	1 935	32 425	1 293	1 852	25 205	59 253	26 083	79 480	5 856

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
213111, DRILLING OIL & GAS WELLS								
All establishments	1 638	401	53 865	1 918 086	45 219	92 059	1 539 296	5 729 222
Producing establishments	1 638	401	53 865	1 918 086	45 219	92 059	1 539 296	5 729 222
Mines or wells only	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines or other types of mines	—	—	—	—	—	—	—	—
Separately operated preparation plants	—	—	—	—	—	—	—	—
Undistributed ¹	1 638	401	53 865	1 918 086	45 219	92 059	1 539 296	5 729 222
Nonproducing establishments	—	—	—	—	—	—	—	—

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
213111	Drilling oil and gas wells	X	X	7 350 113	X	X	3 669 278
2131110	Drilling oil and gas wells	X	X	7 350 113	X	X	3 669 278
21311101	Drilling oil, gas, dry, or service wells	X	X	5 700 088	X	X	N
2131110111	Drilling oil, gas, dry, or service wellsmil ft..	X	S	5 700 088	X	150.9	2 229 111
21311102	Drilling in, spudding in, tailing in, or reworking oil and gas wells	X	X	799 028	X	X	N
2131110221	Drilling in, spudding in, or tailing in oil and gas wellsmil ft..	X	4.9	56 992	X	5.8	79 227
2131110231	Reworking oil and gas wells	X	X	742 036	X	X	670 461
21311103	Oil and gas well directional drilling control	X	X	373 180	X	X	N
2131110341	Oil and gas well directional drilling control	X	X	373 180	X	X	128 669
2131110Y	Drilling oil and gas wells, nsk	X	X	477 817	X	X	N
2131110YWT	Drilling oil and gas wells, nsk #	X	X	477 817	X	X	561 810

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Not applicable for this report]

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
213111	DRILLING OIL & GAS WELLS				
	SUPPLIES CONSUMED BY TYPE				
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	1 921 054	X	237 180
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	189 119	X	82 569
32500075	Industrial chemicals, including acidizing materials (except drilling fluids)	X	7 498	X	D
32592001	Explosive materials (including ammonium nitrate) and blasting accessories	X	2 613	X	D
32599803	Drilling fluids (drilling mud and drilling mud materials; mud thinners, thickeners, and purifiers)	X	54 743	X	45 397
32419100	Lubricating oils and greases, including hydraulic oils	X	28 334	X	21 319
32731001	Cement	X	22 853	X	16 312
33120059	Steel shapes and forms, except castings and forgings	X	139 383	X	65 727
33300005	Drill bits and reamers	X	80 053	X	76 368
33451900	Measuring and controlling instruments and devices (seismometers, surveying and plotting instruments, etc.)	X	56 463	X	6 197
00970098	All other supplies	X	221 706	X	136 381
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	291 166	X	222 554
	FUELS CONSUMED BY TYPE				
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel	3 355.3	107 442	2 806.7	87 095
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel	2 547.2	51 921	394.2	14 471
21111015	Gas (natural, manufactured, and mixed) used as a fuel	0.6	1 184	D	D
32411015	Gasoline used as a fuel	32.7	26 107	12.6	13 608
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	1 156	X	D
00974000	Undistributed fuels#	X	57 722	X	D

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

213111 DRILLING OIL AND GAS WELLS

This U.S. industry comprises establishments primarily engaged in drilling oil and gas wells for others on a contract or fee basis. This industry includes contractors that specialize in spudding in, drilling in, re-drilling, and directional drilling.

The data published with NAICS code 213111 include the following SIC industry:

1381 Drilling oil and gas wells

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2131110YWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative--record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2131110	13810	13810	2131122551	1389013	1389013	2131130261	1241017	1241017
2131110111	1381011	1381011	2131122561	1389025	1389025	2131130291	1241019	1241019
2131110221	1381012	1381012	2131122571	1389026	1389026	2131130YWT	1241000	1241000
2131110231	1381014	1381014	2131122581	1389035	1389035	2131140	10810 pt	10810 pt
2131110341	1381015	1381015	2131122591	1389036	1389036	2131140111	1081010	1081011 pt
2131110YWT	1381000	1381000	2131122YVV	13890XX	13890XX	2131140221	1081014	1081014
2131121	13820 pt	13820 pt	213112W pt	13820 pt	13820 pt	2131140331	1081013	1081013
2131121111	1382010	1382011 pt	213112W pt	13890 pt	13890 pt	2131140341	1081017	1081017
2131121191	1382013	1382013	213112WYWT pt	1382000 pt	1382000 pt	2131140391	1081018	1081018
2131121YVV	13820XX	13820XX	213112WYWT pt	1389000	1389000	2131140YWT	1081000 pt	1081000 pt
2131122	13890 pt	13890 pt	2131130	12410	12410	2131150	14810 pt	14810 pt
2131122111	1389011	1389011	2131130111	1241014	1241014	2131150111	1481014	1481014
2131122215	1389014	1389014	2131130221	1241012	1241012	2131150221	1481012	1481012
2131122321	1389021	1389021	2131130231	1241013	1241013	2131150231	1481013	1481013
2131122431	1389024	1389024	2131130241	1241015	1241015	2131150241	1481015	1481015
2131122541	1389012	1389012	2131130251	1241016	1241016	2131150291	1481018	1481019 pt
						2131150YWT	1481000 pt	1481000 pt

Support Activities for Oil and Gas Operations

1997

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division	301-457-4673
Service Sector Statistics Division	301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213112	Support activities for oil & gas operations	6 385	7 068	106 339	3 628 416	80 734	166 577	2 821 468	9 597 911	3 076 039	11 547 563	1 165 018
138210	Oil & gas exploration services (pt)	N	985	4 161	111 028	2 703	4 881	73 557	247 339	90 108	298 973	39 115
138900	Oil & gas field services, n.e.c.	N	6 083	102 178	3 517 388	78 031	161 696	2 747 911	9 350 572	2 985 931	11 248 590	1 125 903

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213112, SUPPORT ACTIVITIES FOR OIL & GAS OPERATIONS												
United States	1	7 068	968	106 339	3 628 416	80 734	166 577	2 821 468	9 597 911	3 076 039	11 547 563	1 165 018
Alabama	1	53	9	708	18 970	566	1 012	14 539	52 996	13 475	62 143	4 403
Alaska	2	46	23	5 071	284 113	3 782	7 925	231 417	518 197	104 284	584 080	38 987
Arkansas	1	77	7	606	17 251	492	913	13 840	44 226	13 711	49 825	8 117
California	2	257	55	6 460	216 079	5 261	10 671	171 713	436 330	134 674	538 428	33 843
Colorado	2	294	22	2 193	74 298	1 624	3 171	58 015	214 331	65 876	257 327	22 904
Florida	4	27	2	147	4 542	101	186	3 189	9 174	2 893	11 130	1 290
Illinois	2	135	7	673	15 781	508	965	12 635	42 575	11 783	51 388	2 970
Indiana	2	32	1	200	5 121	156	314	4 092	11 648	2 655	13 479	825
Kansas	2	361	27	2 326	60 247	1 749	3 183	45 290	143 054	50 244	181 299	12 264
Kentucky	1	54	4	592	17 659	484	928	16 101	50 456	14 936	61 346	4 046
Michigan	3	111	15	1 100	36 814	791	1 606	26 829	87 105	30 450	109 190	8 483
Missouri	2	13	2	161	3 038	132	167	2 309	13 094	3 899	16 395	598
Montana	1	110	6	687	17 763	506	932	13 808	44 352	12 832	52 138	5 046
New Mexico	1	248	44	3 776	116 198	2 825	5 686	88 566	319 853	105 787	371 169	54 905
North Dakota	1	123	18	1 076	28 865	845	1 580	23 539	66 507	24 549	84 782	6 525
Ohio	3	146	10	872	22 535	625	1 203	17 016	52 767	17 272	63 992	6 047
Pennsylvania	2	82	11	746	20 385	541	1 064	14 912	54 993	27 031	74 758	7 296
Texas	1	2 358	357	38 953	1 328 598	29 213	60 537	1 040 800	3 579 746	1 243 339	4 291 551	535 400
Utah	3	117	12	1 208	34 480	911	1 723	25 869	85 915	31 499	106 124	11 345
West Virginia	2	98	8	980	26 508	725	1 353	20 318	64 714	20 700	75 193	10 282
Wyoming	1	313	33	3 246	105 719	2 462	5 077	82 203	282 226	85 211	335 207	34 614

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
213112, SUPPORT ACTIVITIES FOR OIL & GAS OPERATIONS		213112, SUPPORT ACTIVITIES FOR OIL & GAS OPERATIONS—Con.	
Companies ¹	6 385	Value of primary products shipments or services produced in all industries	\$1,000.. 10 969 777
All establishments	7 068	Value of primary products shipments or services produced in this industry	\$1,000.. 10 478 088
Establishments with 0 to 19 employees	6 100	Value of primary products shipments or services produced in other industries	\$1,000.. 491 689
Establishments with 20 to 99 employees	840	Value added by mining	\$1,000.. 9 597 911
Establishments with 100 employees or more	128	Total inventories, end of 1996	\$1,000.. 643 303
All employees for pay period including March 12	106 339	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. —
Annual payroll	\$1,000.. 3 628 416	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 643 303
Annual fringe benefits not included in payroll	\$1,000.. 703 394	Total inventories, end of 1997	\$1,000.. 770 264
Production, development, and exploration workers for pay period including March 12	number.. 80 734	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. —
Production, development, and exploration worker annual hours	1,000.. 166 577	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 770 264
Production, development, and exploration worker annual wages	\$1,000.. 2 821 468	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 8 244 738
Total cost of supplies	\$1,000.. 3 076 039	Capital expenditures (except land and mineral rights)	\$1,000.. 1 165 018
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 2 010 230	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 1 165 018
Cost of resales	\$1,000.. 380 347	Capital expenditures for mineral exploration and development	\$1,000.. —
Cost of purchased fuels consumed	\$1,000.. 268 252	Capital expenditures for mineral land and rights	\$1,000.. —
Cost of purchased electricity	\$1,000.. 74 912	Deductions from depreciable/depletable assets during year	\$1,000.. 645 968
Cost of contract work	\$1,000.. 342 298	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 8 763 788
Quantity of electricity purchased	1,000 kWh.. 1 348 058	Total depreciation/depletion charges during year	\$1,000.. 765 842
Quantity of electricity generated less sold	1,000 kWh.. D	Total rental payments during year	\$1,000.. 312 833
Cost of purchased communications services	\$1,000.. 61 886	Rental payments for buildings and other structures	\$1,000.. 132 287
Total value of shipments and receipts	\$1,000.. 11 547 563	Rental payments for machinery and equipment	\$1,000.. 180 546
Primary products value of shipments	\$1,000.. 10 478 088	Lease rents	\$1,000.. —
Secondary products value of shipments and receipts for services	\$1,000.. 457 931	Expensed mineral exploration, development, land, and rights	\$1,000.. —
Value of resales	\$1,000.. 611 544		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213112, SUPPORT ACTIVITIES FOR OIL & GAS OPERATIONS												
All establishments	1	7 068	968	106 339	3 628 416	80 734	166 577	2 821 468	9 597 911	3 076 039	11 547 563	1 165 018
Establishments with 0 to 4 employees	5	4 122	—	8 921	187 578	5 635	14 411	137 857	572 577	190 396	706 396	57 105
Establishments with 5 to 9 employees	4	1 143	—	7 594	205 928	5 675	10 211	155 301	483 814	134 322	571 745	47 195
Establishments with 10 to 19 employees	3	835	—	11 313	322 624	8 563	16 352	239 938	745 349	231 356	904 356	73 814
Establishments with 20 to 49 employees	3	629	629	18 754	548 338	14 485	28 110	416 192	1 233 569	344 500	1 460 920	119 875
Establishments with 50 to 99 employees	2	211	211	14 576	479 674	11 027	22 583	355 996	1 253 195	356 093	1 480 904	130 944
Establishments with 100 to 249 employees	1	84	84	11 756	415 851	9 070	19 413	320 781	990 863	345 097	1 175 766	162 405
Establishments with 250 to 499 employees	—	21	21	7 476	261 992	5 645	12 104	194 335	641 496	200 381	754 377	88 725
Establishments with 500 to 999 employees	—	13	13	9 376	472 518	6 993	12 885	390 336	1 491 057	368 146	1 755 689	130 626
Establishments with 1,000 to 2,499 employees	—	9	9	D	D	D	D	D	D	D	D	D
Establishments with 2,500 employees or more	—	1	1	D	D	D	D	D	D	D	D	D
Administrative records ²	9	3 294	—	9 409	180 990	6 030	9 228	129 647	364 823	104 972	443 857	25 938

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
213112, SUPPORT ACTIVITIES FOR OIL & GAS OPERATIONS								
All establishments	7 068	968	106 339	3 628 416	80 734	166 577	2 821 468	9 597 911
Producing establishments	7 068	968	106 339	3 628 416	80 734	166 577	2 821 468	9 597 911
Mines or wells only	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines or other types of mines	—	—	—	—	—	—	—	—
Separately operated preparation plants	—	—	—	—	—	—	—	—
Undistributed ¹	7 068	968	106 339	3 628 416	80 734	166 577	2 821 468	9 597 911
Nonproducing establishments	—	—	—	—	—	—	—	—

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
213112	Support activities for oil and gas field operations	X	X	10 969 777	X	X	N
2131121	Oil and gas field exploration services	X	X	390 316	X	X	N
21311211	Oil and gas field exploration services	X	X	390 316	X	X	N
213112111	Oil and gas field geophysical exploration work, except mapping and surveying services	X	X	386 329	X	X	N
2131121191	Other oil and gas field exploration services	X	X	3 987	X	X	57 733
2131122	Other oil and gas field support activities	X	X	7 881 970	X	X	N
21311221	Cementing oil and gas wells	X	X	834 176	X	X	N
2131122111	Cementing oil and gas wells	X	X	834 176	X	X	472 276
21311222	Oil and gas well surveying and well logging	X	X	1 224 032	X	X	N
2131122215	Oil and gas well surveying and well logging	X	X	1 224 032	X	X	545 233
21311223	Hydraulic fracturing of oil and gas wells	X	X	1 121 036	X	X	N
2131122321	Hydraulic fracturing of oil and gas wells	X	S	1 121 036	X	71.2	1 027 194
21311224	Running, cutting, and pulling casings, tubes, or rods for oil and gas wells	X	X	221 998	X	X	N
2131122431	Running, cutting, and pulling casings, tubes, or rods for oil and gas wells	X	X	221 998	X	X	333 773
21311225	Other oil and gas field services	X	X	4 480 728	X	X	N
2131122541	Acidizing and other chemical treatment of oil and gas wells, excluding hydraulic fracturing	X	77.5	272 772	X	71.3	246 530
2131122551	Perforating oil and gas well casings	X	X	120 101	X	X	99 410
2131122561	Installing oil and gas field production equipment, such as wellhead fittings, pumps, and engines	X	X	110 305	X	X	165 155
2131122571	Cleaning out, bailing out, or swabbing oil and gas wells	X	X	211 367	X	X	131 190
2131122581	Pumping oil and gas wells but not operating leases	X	X	132 475	X	X	105 661
2131122591	All other oil and gas field services	X	X	3 633 708	X	X	2 129 614
213112W	Oil and gas field operations, nsk	X	X	2 697 491	X	X	N
213112WY	Oil and gas field operations, nsk	X	X	2 697 491	X	X	N
213112WYWT	Oil and gas field operations, nsk #	X	X	2 697 491	X	X	N

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 1997. For meaning of abbreviations and symbols, see introductory text. For explanations of terms, see appendixes]

NAICS product or service class code	Product class and geographic area	Value of product shipments or receipts for services (\$1,000)	
		1997	1992
2131121	OIL AND GAS FIELD EXPLORATION SERVICES		
	United States	390 316	N
	Colorado	7 865	N
	Kansas	3 945	N
	Pennsylvania	3 178	N
2131122	OTHER OIL AND GAS FIELD SUPPORT ACTIVITIES		
	United States	7 881 970	N
	Alabama	37 480	N
	Alaska	373 614	N
	Arkansas	28 832	N
	California	384 478	N
	Colorado	112 871	N
	Florida	4 784	N
	Illinois	29 410	N
	Indiana	8 906	N
	Kansas	111 950	N
	Kentucky	49 462	N
	Michigan	53 766	N
	Missouri	11 500	N
	Montana	28 613	N
	New Mexico	273 662	N
	North Dakota	53 251	N
	Ohio	40 320	N
	Pennsylvania	46 294	N
	Texas	2 705 706	N
	Utah	62 063	N
	West Virginia	50 023	N
	Wyoming	214 344	N

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
213112	SUPPORT ACTIVITIES FOR OIL & GAS OPERATIONS				
	SUPPLIES CONSUMED BY TYPE				
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	392 450	X	N
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	129 965	X	N
32500075	Industrial chemicals, including acidizing materials (except drilling fluids)	X	276 263	X	N
32592001	Explosive materials (including ammonium nitrate) and blasting accessories	X	25 665	X	N
32599803	Drilling fluids (drilling mud and drilling mud materials; mud thinners, thickeners, and purifiers)	X	4 883	X	N
32419100	Lubricating oils and greases, including hydraulic oils	X	18 296	X	N
32731001	Cement	X	158 013	X	N
33120059	Steel shapes and forms, except castings and forgings	X	85 192	X	N
33300005	Drill bits and reamers	X	1 998	X	N
33451900	Measuring and controlling instruments and devices (seismometers, surveying and plotting instruments, etc.)	X	10 105	X	N
00970098	All other supplies	X	452 258	X	N
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	455 142	X	N
	FUELS CONSUMED BY TYPE				
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel	1 848.8	53 812	N	N
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel				
	1,000 barrels	923.2	24 203	N	N
21111015	Gas (natural, manufactured, and mixed) used as a fuel	2.0	4 041	N	N
32411015	Gasoline used as a fuel	75.7	59 582	N	N
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	8 954	X	N
00974000	Undistributed fuels#	X	117 660	X	N

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

213112 SUPPORT ACTIVITIES FOR OIL AND GAS OPERATIONS

This U.S. industry comprises establishments primarily engaged in performing oil and gas field services (except contract drilling) for others, on a contract or fee basis. Services included are exploration (except geophysical surveying and mapping); excavating slush pits and cellars; grading and building foundations at well locations; well

surveying; running, cutting, and pulling casings, tubes, and rods; cementing wells; shooting wells; perforating well casings; acidizing and chemically treating wells; and cleaning out, bailing, and swabbing wells.

The data published with NAICS code 213112 include the following SIC industries:

- 1382 Oil and gas field exploration services (pt)
- 1389 Oil and gas field services, n.e.c.

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 213112WYWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative--record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2131110	13810	13810	2131122551	1389013	1389013	2131130261	1241017	1241017
2131110111	1381011	1381011	2131122561	1389025	1389025	2131130291	1241019	1241019
2131110221	1381012	1381012	2131122571	1389026	1389026	2131130YWT	1241000	1241000
2131110231	1381014	1381014	2131122581	1389035	1389035	2131140	10810 pt	10810 pt
2131110341	1381015	1381015	2131122591	1389036	1389036	2131140111	1081010	1081011 pt
2131110YWT	1381000	1381000	2131122YVV	13890XX	13890XX	2131140221	1081014	1081014
2131121	13820 pt	13820 pt	213112W pt	13820 pt	13820 pt	2131140331	1081013	1081013
2131121111	1382010	1382011 pt	213112W pt	13890 pt	13890 pt	2131140341	1081017	1081017
2131121191	1382013	1382013	213112WYWT pt	1382000 pt	1382000 pt	2131140391	1081018	1081018
2131121YVV	13820XX	13820XX	213112WYWT pt	1389000	1389000	2131140YWT	1081000 pt	1081000 pt
2131122	13890 pt	13890 pt	2131130	12410	12410	2131150	14810 pt	14810 pt
2131122111	1389011	1389011	2131130111	1241014	1241014	2131150111	1481014	1481014
2131122215	1389014	1389014	2131130221	1241012	1241012	2131150221	1481012	1481012
2131122321	1389021	1389021	2131130231	1241013	1241013	2131150231	1481013	1481013
2131122431	1389024	1389024	2131130241	1241015	1241015	2131150241	1481015	1481015
2131122541	1389012	1389012	2131130251	1241016	1241016	2131150291	1481018	1481019 pt
						2131150YWT	1481000 pt	1481000 pt

Support Activities for Coal Mining

1997

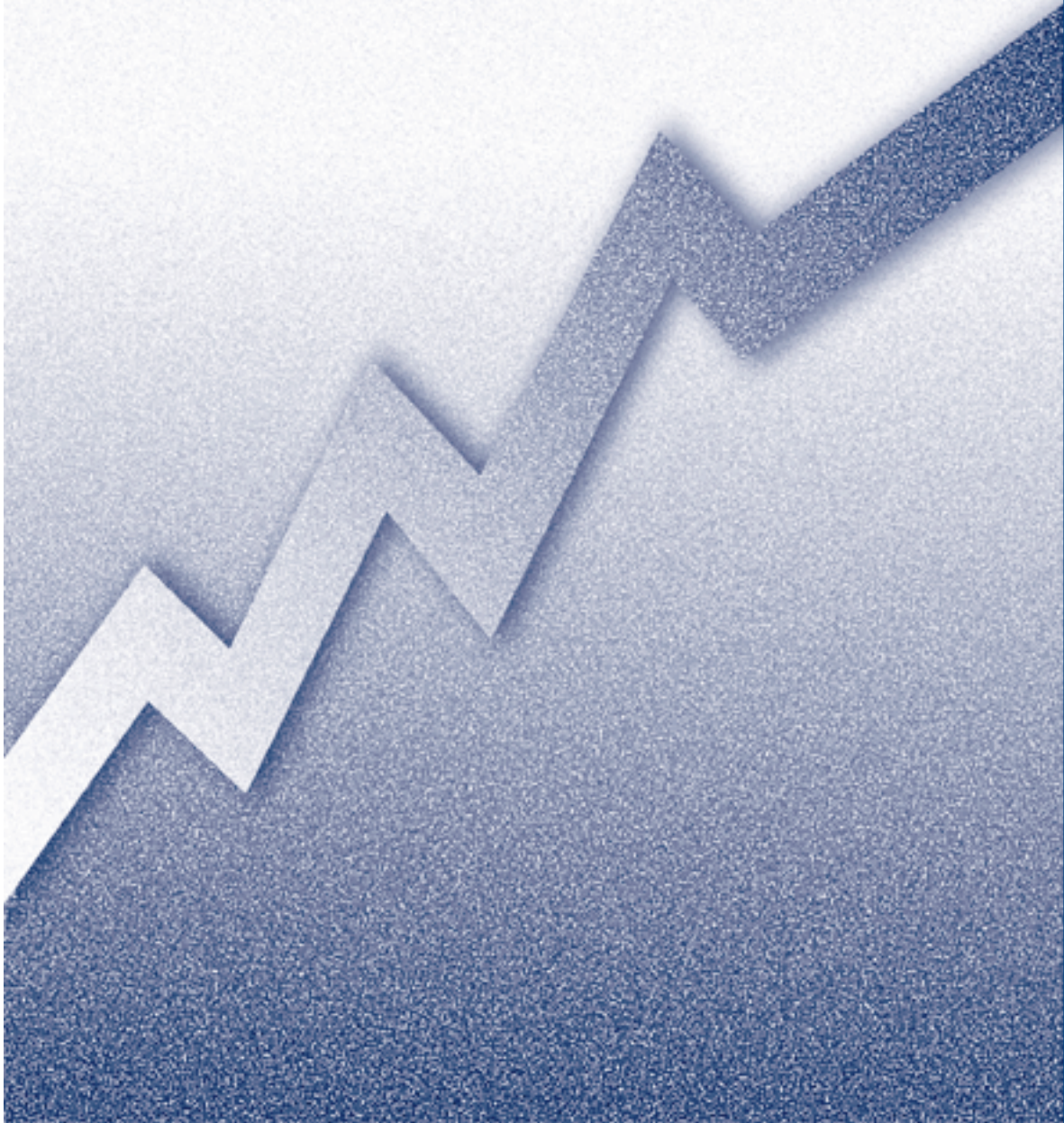
Issued October 1999

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1997 Economic Census

Mining

Industry Series



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Support Activities for Coal Mining

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213113	Support activities for coal mining	280	306	4 990	173 432	4 213	8 465	145 198	426 170	182 383	578 050	30 503
124100	Coal mining services	N	306	4 990	173 432	4 213	8 465	145 198	426 170	182 383	578 050	30 503

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213113, SUPPORT ACTIVITIES FOR COAL MINING												
United States	2	306	67	4 990	173 432	4 213	8 465	145 198	426 170	182 383	578 050	30 503
Illinois	—	8	2	300	14 241	263	643	12 031	18 340	7 965	24 526	1 779
Kentucky	4	57	14	1 065	32 753	961	1 874	29 083	74 589	49 548	117 758	6 379
Ohio	2	22	8	461	15 183	384	813	12 488	47 471	13 726	58 091	3 106
Pennsylvania	2	73	8	654	18 945	518	948	14 182	44 539	18 872	60 707	2 704
West Virginia	3	62	22	1 451	58 857	1 208	2 635	50 031	155 752	52 104	196 911	10 945

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
213113, SUPPORT ACTIVITIES FOR COAL MINING		213113, SUPPORT ACTIVITIES FOR COAL MINING	
— Con.		— Con.	
Companies ¹	number.. 280	Value of primary products shipments or services produced in all industries	\$1,000.. 585 252
All establishments	number.. 306	Value of primary products shipments or services produced in this industry	\$1,000.. 568 217
Establishments with 0 to 19 employees	number.. 239	Value of primary products shipments or services produced in other industries	\$1,000.. 17 035
Establishments with 20 to 99 employees	number.. 58	Value added by mining	\$1,000.. 426 170
Establishments with 100 employees or more	number.. 9	Total inventories, end of 1996	\$1,000.. 41 689
All employees for pay period including March 12	number.. 4 990	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. —
Annual payroll	\$1,000.. 173 432	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 41 689
Annual fringe benefits not included in payroll	\$1,000.. 47 990	Total inventories, end of 1997	\$1,000.. 41 427
Production, development, and exploration workers for pay period including March 12	number.. 4 213	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. —
Production, development, and exploration worker annual hours	1,000.. 8 465	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 41 427
Production, development, and exploration worker annual wages	\$1,000.. 145 198	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 293 256
Total cost of supplies	\$1,000.. 182 383	Capital expenditures (except land and mineral rights)	\$1,000.. 30 503
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 120 096	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 30 503
Cost of resales	\$1,000.. D	Capital expenditures for mineral exploration and development	\$1,000.. —
Cost of purchased fuels consumed	\$1,000.. 20 829	Capital expenditures for mineral land and rights	\$1,000.. —
Cost of purchased electricity	\$1,000.. 7 112	Deductions from depreciable/depletable assets during year	\$1,000.. 14 517
Cost of contract work	\$1,000.. D	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 309 242
Quantity of electricity purchased	1,000 kWh.. 123 480	Total depreciation/depletion charges during year	\$1,000.. 24 820
Quantity of electricity generated less sold	1,000 kWh.. D	Total rental payments during year	\$1,000.. 22 510
Cost of purchased communications services	\$1,000.. 796	Rental payments for buildings and other structures	\$1,000.. 2 135
Total value of shipments and receipts	\$1,000.. 578 050	Rental payments for machinery and equipment	\$1,000.. 20 375
Primary products value of shipments	\$1,000.. 568 217	Lease rents	\$1,000.. —
Secondary products value of shipments and receipts for services	\$1,000.. D	Expensed mineral exploration, development, land, and rights	\$1,000.. —
Value of resales	\$1,000.. D		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213113, SUPPORT ACTIVITIES FOR COAL MINING												
All establishments	2	306	67	4 990	173 432	4 213	8 465	145 198	426 170	182 383	578 050	30 503
Establishments with 0 to 4 employees	4	118	—	312	6 753	214	337	5 207	17 326	15 022	31 495	853
Establishments with 5 to 9 employees	5	71	—	487	12 842	401	674	10 174	28 787	12 139	38 775	2 151
Establishments with 10 to 19 employees	2	50	—	680	21 321	598	1 141	18 534	77 760	22 194	97 324	2 630
Establishments with 20 to 49 employees	2	44	44	1 315	44 861	1 119	2 226	37 190	105 134	44 590	138 882	10 842
Establishments with 50 to 99 employees	3	14	14	933	35 243	831	1 744	30 315	82 909	21 632	97 086	7 455
Establishments with 100 to 249 employees	2	9	9	1 263	52 412	1 050	2 343	43 778	114 254	66 806	174 488	6 572
Establishments with 250 to 499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	129	—	677	16 758	540	857	13 786	33 568	14 342	45 838	2 072

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
213113, SUPPORT ACTIVITIES FOR COAL MINING								
All establishments	306	67	4 990	173 432	4 213	8 465	145 198	426 170
Producing establishments	306	67	4 990	173 432	4 213	8 465	145 198	426 170
Mines or wells only	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines or other types of mines	—	—	—	—	—	—	—	—
Separately operated preparation plants	—	—	—	—	—	—	—	—
Undistributed ¹	306	67	4 990	173 432	4 213	8 465	145 198	426 170
Nonproducing establishments	—	—	—	—	—	—	—	—

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
213113	Support activities for coal mining	X	X	585 252	X	X	536 507
2131130	Coal mining services	X	X	585 252	X	X	536 507
21311301	Strip mining coal not for own account	X	X	67 393	X	X	N
2131130111	Strip mining coal not for own account, 1,000 s tons..	X	12 432.4	67 393	X	12 303.3	95 839
21311302	Other coal mining services	X	X	376 868	X	X	N
2131130221	Coal mining overburden stripping services	X	X	81 273	X	X	52 916
2131130231	Coal mining prospect and test drilling services	X	X	16 767	X	X	17 050
2131130241	Coal mine drilling services, other than prospect and test drilling, including blasting	X	X	36 304	X	X	25 178
2131130251	Recovering culm bank material and auger mining coal not for own account, 1,000 s tons..	X	1 043.3	8 674	X	753.7	6 657
2131130261	Sinking coal mine shafts and driving coal mine tunnels services	X	X	34 637	X	X	38 499
2131130291	Other coal mining services, nec	X	X	199 213	X	X	101 487
2131130Y	Coal mining services, nsk	X	X	140 991	X	X	N
2131130YWT	Coal mining services, nsk #	X	X	140 991	X	X	198 881

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Not applicable for this report]

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
213113	SUPPORT ACTIVITIES FOR COAL MINING				
	SUPPLIES CONSUMED BY TYPE				
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	16 282	X	7 670
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	24 552	X	28 908
32592005	Ammonium nitrate	X	3 789	X	9 913
32592013	Explosive materials (except ammonium nitrate) and blasting accessories	X	5 837	X	6 616
33120059	Steel shapes and forms, except castings and forgings	X	4 759	X	4 437
00970098	All other supplies	X	19 226	X	21 064
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	45 651	X	37 455
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel	-	-	D	D
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel	166.4	5 581	240.8	7 112
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel	47.8	1 327	D	D
21111015	Gas (natural, manufactured, and mixed) used as a fuel	D	D	D	D
32411015	Gasoline used as a fuel	0.9	990	1.5	1 621
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	D	X	D
00974000	Undistributed fuels#	X	D	X	D

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

213113 SUPPORT ACTIVITIES FOR COAL MINING

This U.S. industry comprises establishments primarily engaged in providing support services, on a fee or contract basis, required for coal mining. Exploration for coal is included in this industry. Exploration includes traditional

prospecting methods, such as taking core samples and making geological observations at prospective sites.

The data published with NAICS code 213113 include the following SIC industry:

1241 Coal mining services

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2131130YWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2131110	13810	13810	2131122551	1389013	1389013	2131130261	1241017	1241017
2131110111	1381011	1381011	2131122561	1389025	1389025	2131130291	1241019	1241019
2131110221	1381012	1381012	2131122571	1389026	1389026	2131130YWT	1241000	1241000
2131110231	1381014	1381014	2131122581	1389035	1389035	2131140	10810 pt	10810 pt
2131110341	1381015	1381015	2131122591	1389036	1389036	2131140111	1081010	1081011 pt
2131110YWT	1381000	1381000	2131122YVV	13890XX	13890XX	2131140221	1081014	1081014
2131121	13820 pt	13820 pt	213112W pt	13820 pt	13820 pt	2131140331	1081013	1081013
2131121111	1382010	1382011 pt	213112W pt	13890 pt	13890 pt	2131140341	1081017	1081017
2131121191	1382013	1382013	213112WYWT pt	1382000 pt	1382000 pt	2131140391	1081018	1081018
2131121YVV	13820XX	13820XX	213112WYWT pt	1389000	1389000	2131140YWT	1081000 pt	1081000 pt
2131122	13890 pt	13890 pt	2131130	12410	12410	2131150	14810 pt	14810 pt
2131122111	1389011	1389011	2131130111	1241014	1241014	2131150111	1481014	1481014
2131122215	1389014	1389014	2131130221	1241012	1241012	2131150221	1481012	1481012
2131122321	1389021	1389021	2131130231	1241013	1241013	2131150231	1481013	1481013
2131122431	1389024	1389024	2131130241	1241015	1241015	2131150241	1481015	1481015
2131122541	1389012	1389012	2131130251	1241016	1241016	2131150291	1481018	1481019 pt
						2131150YWT	1481000 pt	1481000 pt

Support Activities for Metal Mining

1997

Issued November 1999

EC97N-2131D

1997 Economic Census

Mining

Industry Series



U S C E N S U S B U R E A U

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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213114	Support activities for metal mining	141	189	3 031	109 234	2 565	5 008	91 579	237 554	125 662	339 753	23 463
108110	Metal mining services (pt) ..	N	189	3 031	109 234	2 565	5 008	91 579	237 554	125 662	339 753	23 463

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	
	E ¹	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)					Annual wages (\$1,000)
213114, SUPPORT ACTIVITIES FOR METAL MINING												
United States	2	189	39	3 031	109 234	2 565	5 008	91 579	237 554	125 662	339 753	23 463
Arizona	2	20	5	329	11 250	263	524	8 543	36 518	16 530	51 152	1 896
California	1	17	1	181	5 386	154	295	4 674	13 157	5 867	17 652	1 372
Nevada	1	33	14	1 063	47 752	936	1 947	41 703	86 012	55 256	133 978	7 290
Utah	5	8	4	230	5 518	192	287	4 300	11 873	5 823	16 979	717

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1-10 to 19 percent; 2-20 to 29 percent; 3-30 to 39 percent; 4-40 to 49 percent; 5-50 to 59 percent; 6-60 to 69 percent; 7-70 to 79 percent; 8-80 to 89 percent; 9-90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
213114, SUPPORT ACTIVITIES FOR METAL MINING		213114, SUPPORT ACTIVITIES FOR METAL MINING—Con.	
Companies ¹ number..	141	Value of primary products shipments or services produced in all industries..... \$1,000..	334 403
All establishments number..	189	Value of primary products shipments or services produced in this industry..... \$1,000..	327 409
Establishments with 0 to 19 employees..... number..	150	Value of primary products shipments or services produced in other industries..... \$1,000..	6 994
Establishments with 20 to 99 employees..... number..	33	Value added by mining..... \$1,000..	237 554
Establishments with 100 employees or more..... number..	6	Total inventories, end of 1996..... \$1,000..	20 512
All employees for pay period including March 12..... number..	3 031	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996..... \$1,000..	—
Annual payroll..... \$1,000..	109 234	Supplies, parts, fuels, etc., inventories, end of 1996..... \$1,000..	20 512
Annual fringe benefits not included in payroll..... \$1,000..	28 167	Total inventories, end of 1997..... \$1,000..	16 412
Production, development, and exploration workers for pay period including March 12..... number..	2 565	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997..... \$1,000..	—
Production, development, and exploration worker annual hours..... 1,000..	5 008	Supplies, parts, fuels, etc., inventories, end of 1997..... \$1,000..	16 412
Production, development, and exploration worker annual wages..... \$1,000..	91 579	Gross book value of depreciable/depletable assets at beginning of year..... \$1,000..	194 510
Total cost of supplies..... \$1,000..	125 662	Capital expenditures (except land and mineral rights)..... \$1,000..	23 463
Cost of supplies used, minerals received, and purchased machinery installed..... \$1,000..	89 446	Capital expenditures for buildings, structures, machinery, and equipment (new and used)..... \$1,000..	23 463
Cost of resales..... \$1,000..	10 729	Capital expenditures for mineral exploration and development..... \$1,000..	—
Cost of purchased fuels consumed..... \$1,000..	8 313	Capital expenditures for mineral land and rights..... \$1,000..	—
Cost of purchased electricity..... \$1,000..	1 945	Deductions from depreciable/depletable assets during year..... \$1,000..	8 396
Cost of contract work..... \$1,000..	15 229	Gross book value of depreciable/depletable assets at end of year..... \$1,000..	209 577
Quantity of electricity purchased..... 1,000 kWh..	21 911	Total depreciation/depletion charges during year..... \$1,000..	17 313
Quantity of electricity generated less sold..... 1,000 kWh..	—	Total rental payments during year..... \$1,000..	10 679
Cost of purchased communications services..... \$1,000..	1 583	Rental payments for buildings and other structures..... \$1,000..	3 250
Total value of shipments and receipts..... \$1,000..	339 753	Rental payments for machinery and equipment..... \$1,000..	7 429
Primary products value of shipments..... \$1,000..	327 409	Lease rents..... \$1,000..	—
Secondary products value of shipments and receipts for services..... \$1,000..	1 053	Expensed mineral exploration, development, land, and rights..... \$1,000..	—
Value of resales..... \$1,000..	11 291		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213114, SUPPORT ACTIVITIES FOR METAL MINING												
All establishments.....	2	189	39	3 031	109 234	2 565	5 008	91 579	237 554	125 662	339 753	23 463
Establishments with 0 to 4 employees.....	4	106	—	226	5 629	163	278	4 803	19 721	7 497	25 764	1 454
Establishments with 5 to 9 employees.....	5	19	—	118	3 788	100	184	3 188	7 774	3 438	10 455	757
Establishments with 10 to 19 employees.....	2	25	—	346	13 001	292	538	10 577	31 054	13 501	38 865	5 690
Establishments with 20 to 49 employees.....	4	21	21	666	26 086	564	1 190	21 914	59 438	26 980	80 244	6 174
Establishments with 50 to 99 employees.....	—	12	12	D	D	D	D	D	D	D	D	D
Establishments with 100 to 249 employees.....	—	6	6	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees.....	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 500 to 999 employees.....	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees.....	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more.....	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	62	—	192	4 760	137	228	3 947	11 651	4 679	15 530	800

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
213114, SUPPORT ACTIVITIES FOR METAL MINING								
All establishments	189	39	3 031	109 234	2 565	5 008	91 579	237 554
Producing establishments	189	39	3 031	109 234	2 565	5 008	91 579	237 554
Mines or wells only	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines or other types of mines	—	—	—	—	—	—	—	—
Separately operated preparation plants	—	—	—	—	—	—	—	—
Undistributed ¹	189	39	3 031	109 234	2 565	5 008	91 579	237 554
Nonproducing establishments	—	—	—	—	—	—	—	—

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
213114	Support activities for metal mining	X	X	334 403	X	X	N
2131140	Metal mining services	X	X	334 403	X	X	N
21311401	Metal mining exploration work, except prospect and test drilling and geophysical surveying services	X	X	31 983	X	X	N
2131140111	Metal mining exploration work, except prospect and test drilling and geophysical surveying services	X	X	31 983	X	X	N
21311402	Open-pit metal mining ores not for own account	X	X	54 382	X	X	N
2131140221	Open-pit metal mining ores not for own account	X	X	54 382	X	X	114 488
21311403	Other metal mining services	X	X	192 568	X	X	N
2131140331	Metal mining prospect services and test drilling services	X	X	148 451	X	X	60 440
2131140341	Sinking metal mine shafts and driving metal mine tunnels services	X	X	35 975	X	X	10 755
2131140391	Other metal mining services, nec	X	X	8 142	X	X	8 905
2131140Y	Metal mining services, nsk	X	X	55 470	X	X	N
2131140YWT	Metal mining services, nsk #	X	X	55 470	X	X	N

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Not applicable for this report]

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
213114	SUPPORT ACTIVITIES FOR METAL MINING				
	SUPPLIES CONSUMED BY TYPE				
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	13 464	X	N
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	18 652	X	N
32592005	Ammonium nitrate	X	D	X	N
32592013	Explosive materials (except ammonium nitrate) and blasting accessories	X	D	X	N
33120059	Steel shapes and forms, except castings and forgings	X	6 963	X	N
00970098	All other supplies	X	D	X	N
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	20 272	X	N
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel	-	-	N	N
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel	113.9	3 990	N	N
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel	-	-	N	N
21111015	Gas (natural, manufactured, and mixed) used as a fuel	D	D	N	N
32411015	Gasoline used as a fuel	1.8	2 169	N	N
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	X	D	X	N
00974000	Undistributed fuels#	X	D	X	N

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

213114 SUPPORT ACTIVITIES FOR METAL MINING

This U.S. industry comprises establishments primarily engaged in providing support services, on a fee or contract basis, required for the mining and quarrying of metallic minerals and for the extraction of metal ores. Exploration for minerals is included in this industry. Exploration (except geophysical surveying and mapping services) includes traditional prospecting methods, such as taking core samples and making geological observations at prospective sites.

The data published with NAICS code 213114 include the following SIC industry:

1081 Metal mining services (pt)

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2131140YWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2131110	13810	13810	2131122551	1389013	1389013	2131130261	1241017	1241017
2131110111	1381011	1381011	2131122561	1389025	1389025	2131130291	1241019	1241019
2131110221	1381012	1381012	2131122571	1389026	1389026	2131130YWT	1241000	1241000
2131110231	1381014	1381014	2131122581	1389035	1389035	2131140	10810 pt	10810 pt
2131110341	1381015	1381015	2131122591	1389036	1389036	2131140111	1081010	1081011 pt
2131110YWT	1381000	1381000	2131122YVW	13890XX	13890XX	2131140221	1081014	1081014
2131121	13820 pt	13820 pt	213112W pt	13820 pt	13820 pt	2131140331	1081013	1081013
2131121111	1382010	1382011 pt	213112W pt	13890 pt	13890 pt	2131140341	1081017	1081017
2131121191	1382013	1382013	213112WYWT pt	1382000 pt	1382000 pt	2131140391	1081018	1081018
2131121YVW	13820XX	13820XX	213112WYWT pt	1389000	1389000	2131140YWT	1081000 pt	1081000 pt
2131122	13890 pt	13890 pt	2131130	12410	12410	2131150	14810 pt	14810 pt
2131122111	1389011	1389011	2131130111	1241014	1241014	2131150111	1481014	1481014
2131122215	1389014	1389014	2131130221	1241012	1241012	2131150221	1481012	1481012
2131122321	1389021	1389021	2131130231	1241013	1241013	2131150231	1481013	1481013
2131122431	1389024	1389024	2131130241	1241015	1241015	2131150241	1481015	1481015
2131122541	1389012	1389012	2131130251	1241016	1241016	2131150291	1481018	1481019 pt
						2131150YWT	1481000 pt	1481000 pt

Support Activities for Nonmetallic Minerals (Except Fuels)

1997

Issued October 1999

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1997 Economic Census

Mining

Industry Series



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Mining

SCOPE

The Mining sector of the 1997 Economic Census covers all mining establishments of companies with one or more paid employees. Mining is defined as the extraction of naturally occurring mineral solids, such as coal and ores; liquid minerals, such as petroleum; and gases, such as natural gas. The term mining is used in the broad sense to include quarrying, well operations, beneficiating (e.g., crushing, screening, washing, and floatation), and other preparations customarily performed at the mine site or as part of the mining activity.

The Mining sector distinguishes two basic activities: mine operation and mining support activities. Mine operation includes establishments operating mines, quarries, or oil and gas wells on their own account or for others on a contract or fee basis. Mining support activities include establishments that perform exploration (except geophysical surveying) and/or other mining services on a contract or fee basis.

Establishments in the Mining sector are classified by industry according to the natural resources mined or to be mined. Included are establishments that develop the mine site, extract the natural resources, and/or those that beneficiate (i.e., prepare) the mineral mined. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. The range of preparation activities varies by mineral and the purity of any given ore deposit.

Mining, beneficiation, and manufacturing activities often occur in a single location. Separate receipts are collected for these activities whenever possible. When receipts cannot be broken out between mining and manufacturing, establishments that mine or quarry nonmetallic minerals and beneficiate the nonmetallic minerals into more finished manufactured products are classified based on the primary activity of the establishment.

Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) are excluded.

GENERAL

This report, from the 1997 Economic Census – Mining, is one of a series of 29 industry reports and 51 geographic area reports, each of which provides statistics for individual industries, states, or offshore areas. Also included for this sector are the General, Products, and Materials and Fuels Consumed Summary reports, and data files on Location of Mining Operations.

Each industry report presents data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in Appendix B. These reports include such statistics as number of establishments, employment, payroll, value added by mining, cost of supplies used, value of shipments and receipts, capital expenditures, etc., for each mining industry. Explanations of these and other terms may be found in Appendix A. The industry reports also include data for states with 100 employees or more.

State reports present similar statistics at the sector level for each state, the District of Columbia, and the offshore areas. The state of Delaware and the District of Columbia are combined in a single report. The state reports also include data for industries with 100 employees or more in the state.

The General Summary report contains industry and geographic area statistics summarized in one report. It includes higher levels of aggregation than the industry and state reports as well as revisions to the data made after the release of the industry and state reports.

The Products Summary and the Materials and Fuels Consumed Summary reports summarize the products, materials, and fuels data published in the industry series reports.

The Location of Mining Operations data files include statistics on the number of establishments by three- and six-digit NAICS industry by state and offshore area by employment size of the establishment.

GEOGRAPHIC AREAS COVERED

The state reports for the mining industries include data at the state level and some offshore areas. No substate data are available.

Data for offshore areas that are part of Alaska, California, Louisiana, and Texas are included in their respective state area reports and represent offshore operations on all these state offshore leases and all Federal offshore leases defined by their state plane coordinate systems. State offshore includes the areas extending from the coastline up to 3 geographical miles distance except for Texas and Florida which extend 3 marine leagues from the coastline in the Gulf of Mexico. Data for offshore areas not associated with a state are in an Offshore Areas geographic report which includes the following areas:

Atlantic Offshore

- Atlantic Federal Area
- New Hampshire state offshore
- Maine state offshore
- Massachusetts state offshore
- Connecticut state offshore
- New York state offshore
- New Jersey state offshore
- Delaware state offshore
- Maryland state offshore
- Virginia state offshore
- North Carolina state offshore
- South Carolina state offshore
- Georgia state offshore
- Florida state Atlantic offshore

Northern Gulf of Mexico Offshore

- Northern Gulf of Mexico Federal Areas defined by the Universal Transverse Mercator Coordinate System (including areas generally south of the state plane coordinate systems of Louisiana and Texas)
- Mississippi state offshore
- Alabama state offshore
- Florida state Gulf offshore

Pacific Offshore

- Pacific Federal areas defined by Universal Transverse Mercator Coordinate System
- Oregon state offshore
- Washington state offshore

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) has had only a minor effect on the comparability of data between the 1992 and 1997 censuses at the sector level. However, within the sector the number of major levels changed from four to three. In

addition, portions of industries left mining for the services sector. Prominent among items leaving mining are geophysical surveying and mapping services for metal mining, oil and gas, and nonmetallic minerals mining. If industries are not comparable between the two censuses, historic data are not shown.

Another change resulting from the conversion to NAICS is that data for central administrative offices (CAOs) associated with mining are no longer included in the mining data. This change affects all levels of data shown in the reports.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure and may be released even when other information is withheld.

The disclosure analysis for the industry statistics files is based on the total value of shipments and receipts. When the total value of shipments and receipts cannot be shown without disclosing information for individual companies, the complete line is suppressed except for capital expenditures. If capital expenditures alone is a disclosure, only capital expenditures and cost of supplies statistics are suppressed. The suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

Table 1. Industry Statistics on NAICS Basis With Distribution Among 1987 SIC-Based Industries: 1997

[NAICS codes appear in bold type. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS or SIC code	Industry	Companies ¹	All establishments ²	All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
				For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213115	Support activities for nonmetallic minerals (except fuels)	137	144	1 623	57 070	1 248	2 601	42 468	125 406	62 121	172 037	15 490
148110	Nonmetallic minerals services, except fuels (pt) .	N	144	1 623	57 070	1 248	2 601	42 468	125 406	62 121	172 037	15 490

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.
²Includes establishments of companies with payroll at any time during the year.

Table 2. Industry Statistics for Selected States and Offshore Areas: 1997

[Offshore areas refer to those areas not associated with a state. States that are disclosures or with less than 100 employees are not shown. * Indicates geographic change, but not applicable to this sector. For explanation of terms, see appendixes. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	
	E ¹	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)					Annual wages (\$1,000)
213115, SUPPORT ACTIVITIES FOR NONMETALLIC MINERALS (EXCEPT FUELS)												
United States	1	144	20	1 623	57 070	1 248	2 601	42 468	125 406	62 121	172 037	15 490
Georgia	—	11	2	203	5 877	139	316	3 689	15 320	6 346	17 620	4 046
Idaho	—	4	3	161	6 620	142	293	5 829	19 445	6 298	24 919	824

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

Table 3. Detailed Statistics by Industry: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Value	Item	Value
213115, SUPPORT ACTIVITIES FOR NONMETALLIC MINERALS (EXCEPT FUELS)		213115, SUPPORT ACTIVITIES FOR NONMETALLIC MINERALS (EXCEPT FUELS)—Con.	
Companies ¹	137	Value of primary products shipments or services produced in all industries	\$1,000.. 223 891
All establishments	144	Value of primary products shipments or services produced in this industry	\$1,000.. 154 816
Establishments with 0 to 19 employees	124	Value of primary products shipments or services produced in other industries	\$1,000.. 69 075
Establishments with 20 to 99 employees	18	Value added by mining	\$1,000.. 125 406
Establishments with 100 employees or more	2	Total inventories, end of 1996	\$1,000.. 9 520
All employees for pay period including March 12	1 623	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1996	\$1,000.. —
Annual payroll	57 070	Supplies, parts, fuels, etc., inventories, end of 1996	\$1,000.. 9 520
Annual fringe benefits not included in payroll	11 143	Total inventories, end of 1997	\$1,000.. 9 737
Production, development, and exploration workers for pay period including March 12	1 248	Mineral products, crude petroleum, and natural gas liquids inventories, end of 1997	\$1,000.. —
Production, development, and exploration worker annual hours	2 601	Supplies, parts, fuels, etc., inventories, end of 1997	\$1,000.. 9 737
Production, development, and exploration worker annual wages	42 468	Gross book value of depreciable/depletable assets at beginning of year	\$1,000.. 171 848
Total cost of supplies	\$1,000.. 62 121	Capital expenditures (except land and mineral rights)	\$1,000.. 15 490
Cost of supplies used, minerals received, and purchased machinery installed	\$1,000.. 45 588	Capital expenditures for buildings, structures, machinery, and equipment (new and used)	\$1,000.. 15 490
Cost of resales	\$1,000.. D	Capital expenditures for mineral exploration and development	\$1,000.. —
Cost of purchased fuels consumed	\$1,000.. 9 602	Capital expenditures for mineral land and rights	\$1,000.. —
Cost of purchased electricity	\$1,000.. 2 133	Deductions from depreciable/depletable assets during year	\$1,000.. 8 087
Cost of contract work	\$1,000.. D	Gross book value of depreciable/depletable assets at end of year	\$1,000.. 179 251
Quantity of electricity purchased	1,000 kWh.. 32 545	Total depreciation/depletion charges during year	\$1,000.. 15 645
Quantity of electricity generated less sold	1,000 kWh.. D	Total rental payments during year	\$1,000.. 5 891
Cost of purchased communications services	\$1,000.. 607	Rental payments for buildings and other structures	\$1,000.. 690
Total value of shipments and receipts	\$1,000.. 172 037	Rental payments for machinery and equipment	\$1,000.. 5 201
Primary products value of shipments	\$1,000.. 154 816	Lease rents	\$1,000.. —
Secondary products value of shipments and receipts for services	\$1,000.. D	Expensed mineral exploration, development, land, and rights	\$1,000.. —
Value of resales	\$1,000.. D		

¹For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

Table 4. Industry Statistics by Employment Size: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Employment size class	E ¹	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)	Cost of supplies used, purchased machinery installed, etc. (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)
		Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)				
213115, SUPPORT ACTIVITIES FOR NONMETALLIC MINERALS (EXCEPT FUELS)												
All establishments	1	144	20	1 623	57 070	1 248	2 601	42 468	125 406	62 121	172 037	15 490
Establishments with 0 to 4 employees	5	69	—	154	3 872	103	185	2 894	9 559	4 456	13 195	820
Establishments with 5 to 9 employees	1	23	—	153	4 584	118	217	3 603	10 389	6 342	15 281	1 450
Establishments with 10 to 19 employees	—	32	—	397	14 995	305	650	10 461	38 126	17 872	51 120	4 878
Establishments with 20 to 49 employees	—	14	14	462	17 046	362	758	12 416	27 989	17 845	42 597	3 237
Establishments with 50 to 99 employees	1	4	4	D	D	D	D	D	D	D	D	D
Establishments with 100 to 249 employees	—	2	2	D	D	D	D	D	D	D	D	D
Establishments with 250 to 499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 to 2,499 employees	—	—	—	—	—	—	—	—	—	—	—	—
Establishments with 2,500 employees or more	—	—	—	—	—	—	—	—	—	—	—	—
Administrative records ²	9	35	—	86	1 979	53	88	1 366	4 137	2 095	5 792	440

¹Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

²Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Table 5. Industry Statistics by Type of Operation: 1997

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Industry and type of operation	All establishments		All employees		Production, development, and exploration workers			Value added by mining (\$1,000)
	Total	With 20 employees or more	For pay period including March 12	Annual payroll (\$1,000)	For pay period including March 12	Annual hours (1,000)	Annual wages (\$1,000)	
213115, SUPPORT ACTIVITIES FOR NONMETALLIC MINERALS (EXCEPT FUELS)								
All establishments	144	20	1 623	57 070	1 248	2 601	42 468	125 406
Producing establishments	144	20	1 623	57 070	1 248	2 601	42 468	125 406
Mines or wells only	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines, well operations, or other types of mines	—	—	—	—	—	—	—	—
Mines with preparation plants	—	—	—	—	—	—	—	—
Underground mines	—	—	—	—	—	—	—	—
Open-pit mines	—	—	—	—	—	—	—	—
Combination mines or other types of mines	—	—	—	—	—	—	—	—
Separately operated preparation plants	—	—	—	—	—	—	—	—
Undistributed ¹	144	20	1 623	57 070	1 248	2 601	42 468	125 406
Nonproducing establishments	—	—	—	—	—	—	—	—

¹Includes data for establishments that were not possible to classify based on information available.

Table 6a. Products or Services Statistics: 1997 and 1992

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS product or service code	Product or service	1997			1992		
		Quantity of production for all purposes	Product shipments or receipts for services		Quantity of production for all purposes	Product shipments or receipts for services	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
213115	Support activities for nonmetallic minerals (except fuels)	X	X	223 891	X	X	N
2131150	Nonmetallic minerals services (except fuels)	X	X	223 891	X	X	N
21311501	Open-pit or quarry mining nonmetallic minerals not for own account	X	X	50 379	X	X	N
2131150111	Open-pit or quarry mining nonmetallic minerals not for own account	X	X	50 379	X	X	46 712
21311502	Other nonmetallic minerals services (except fuels)	X	X	94 051	X	X	N
2131150221	Nonmetallic mineral overburden stripping services	X	X	17 874	X	X	19 374
2131150231	Nonmetallic mineral prospect and test drilling services	X	X	20 280	X	X	7 725
2131150241	Nonmetallic mineral drilling services, other than prospect and test drilling, including blasting	X	X	43 450	X	X	17 895
2131150291	Other nonmetallic minerals services (except fuels), nec	X	X	12 447	X	X	N
2131150Y	Nonmetallic minerals services (except fuels), nsk #	X	X	79 461	X	X	N
2131150YWT	Nonmetallic minerals services (except fuels), nsk #	X	X	79 461	X	X	N

Additional information is available for this item; see Appendix F.

Table 6b. Product Class Shipments for Selected States and Offshore Areas: 1997 and 1992

[Not applicable for this report]

Table 7. Selected Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type: 1997 and 1992

[Includes quantity and cost of supplies and fuels consumed or put into production by establishments classified only in this industry. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

NAICS supply or fuel code	Supply or fuel consumed	1997		1992	
		Quantity	Delivered cost (\$1,000)	Quantity	Delivered cost (\$1,000)
213115	SUPPORT ACTIVITIES FOR NONMETALLIC MINERALS (EXCEPT FUELS)				
	SUPPLIES CONSUMED BY TYPE				
33300007	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation	X	8 304	X	N
33300009	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment	X	8 620	X	N
32592005	Ammonium nitrate	X	490	X	N
32592013	Explosive materials (except ammonium nitrate) and blasting accessories	X	2 199	X	N
33120059	Steel shapes and forms, except castings and forgings	X	627	X	N
00970098	All other supplies	X	6 759	X	N
00973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used#	X	18 589	X	N
	FUELS CONSUMED BY TYPE				
21211003	Coal (bituminous, subbituminous, lignite, and anthracite) consumed as a fuel	-	-	N	N
32411017	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel used as a fuel	108.0	3 650	N	N
32411019	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel used as a fuel				
21111015	Gas (natural, manufactured, and mixed) used as a fuel	33.0	972	N	N
32411015	Gasoline used as a fuel	D	D	N	N
00960018	Other fuels (liquified pet. gas, coke, wood, etc.)	0.6	674	N	N
00974000	Undistributed fuels#	X	D	X	N
		X	4 261	X	N

Additional information is available for this item; see Appendix F.

Appendix A.

Explanation of Terms

ANNUAL PAYROLL

This item includes the gross earnings of all employees on the payrolls of operating mining establishments paid in the calendar year. Respondents were told they could follow the definition of payrolls used for calculating the Federal withholding tax. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' social security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of mining establishments.

The census definition of payrolls is identical to that recommended to all Federal statistical agencies by the Office of Management and Budget. It should be noted that this definition does not include employers' social security contributions or other nonpayroll labor costs, such as employees' pension plans, group insurance premiums, and workers' compensation.

Also collected, but not included in payroll, are employers' total supplemental labor costs (those required by Federal and state laws and those incurred voluntarily or as part of collective bargaining agreements).

BEGINNING- AND END-OF-YEAR INVENTORIES

Respondents were asked to report their beginning-of-year and end-of-year inventories at cost or market. Effective with the 1982 Economic Census, this change to a uniform instruction for reporting inventories was introduced for all sector reports. Prior to 1982, respondents were permitted to value inventories using any generally accepted accounting method. Beginning in 1982, LIFO users were asked to first report inventory values prior to the LIFO adjustment and then to report the LIFO reserve and the LIFO value after adjustment for the reserve.

Inventory Data by Type

Total inventories and two detailed components (1) mined or quarried products and (2) supplies, parts, fuels, etc., were collected.

CAPITAL EXPENDITURES

This item includes permanent additions and major alterations as well as replacements and additions to capacity for which depreciation, depletion, or Office of Minerals

Exploration accounts are ordinarily maintained. Reported capital expenditures include work done on contract, as well as by the mine forces. Totals for expenditures include the costs of assets leased from other concerns through capital leases. Excluded are expenditures for land and cost of maintenance and repairs charged as current operating expenses. Also excluded are capital expenditures for mineral land and rights which are shown as a separate item.

For any equipment or structure transferred for the use of the reporting establishment by the parent company or one of its subsidiaries, the value at which it was transferred to the establishment was to be reported. If an establishment changed ownership during the year, the cost of the fixed assets (building and equipment) was to be reported.

CAPITAL EXPENDITURES FOR MINERAL LAND AND RIGHTS

This item includes all capital expenditures for acquiring either undeveloped or developed acreage. Included are all capitalized lease bonuses and any other outlays necessary to acquire leases, mineral rights, fee lands incident to mineral exploration, development, or production.

COST OF PURCHASED COMMUNICATION SERVICES

Establishments were requested to provide information on the cost of purchased communication services for such items as telephone, data transmission, fax, etc. This item reflects the costs paid directly by the establishment.

COST OF SUPPLIES USED, PURCHASED MACHINERY INSTALLED, ETC.

This term refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these items. It includes the cost of these items whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year. Included are items charged to both current and capital accounts.

Included in this item are:

1. **Costs of supplies used, minerals received for preparation, and purchased machinery installed.**

Includes all major supplies which were important parts of the cost of production, exploration, and development of a particular industry.

2. **Cost of products bought and sold in the same condition.**
3. **Cost of fuels consumed for heat and power.** Includes the cost of fuel consumed, whether purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.
4. **Cost of purchased electricity.** The cost of purchased electric energy represents the amount actually used during the year for heat and power. In addition, information was collected on the quantity of electric energy purchased and also the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other establishments of the same company.
5. **Cost of contract work.** This term applies to the cost of all work done for an establishment by others. It includes payments for supplies and equipment furnished by the contractor incidental to the contract work, and cost of services performed by others in the operation or development of the establishment. The term "contract work" refers to the fee a company pays to another company to perform a service. It excludes payments to miners paid on a per ton, car, yard, or footage basis. Also excluded are payments to suppliers who mined for their own account on property owned or leased by them and who paid royalties either directly or indirectly on the minerals mined.

Specific Supplies Used, Minerals Received for Preparation and Purchased Machinery Installed

In addition to the total cost of supplies, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of the major supplies used in mining. The inquiries were restricted to those supplies which were important parts of the cost of production, exploration, and development in a particular industry and for which cost information was available from the establishment's records. Except for the crude petroleum and natural gas and the support activities for mining industries, figures were also obtained on crude minerals mined at the establishment, received from other establishments of the company or purchased from others, and received for preparation on a custom or toll basis. If less than \$25,000 of a listed supply was consumed by an establishment, the cost data could be reported in the "All other supplies..." census supply code 00970098. Also, the cost of supplies for small establishments for which administrative records or

short forms were used was imputed into the "Undistributed - minerals, purchased machinery, parts.....," census supply code 00973000.

Specific Fuels Consumed

For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and a cost figure for other fuels. Data also were obtained on the quantity of crude petroleum, natural gas, and coal produced and consumed at the same establishment for heat and power. The cost of fuels for small establishments for which administrative records or short forms were used was imputed into the "Undistributed fuels," census fuel code 00974000.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale. Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

CURRENT ACCOUNT EXPENDITURES FOR MINERAL PROPERTIES

This item includes all expenses for mineral properties, exploration, and development charged to current accounts. Included are all supplies, machinery, equipment, parts, fuels, power, etc., used for development or exploration and charged to current operating expenses. Also included are royalty payments, acquisition costs for mineral land and rights which were not associated with exploration or development activity, and the cost of maintenance and repairs associated with exploration or development activity and charged to current accounts.

DEPRECIATION AND/OR DEPLETION CHARGES

This item includes depreciation, depletion, and amortization charged during the year against assets. Depreciation charged against assets acquired since the beginning of the year and against assets sold or retired during the year are components of this category. Respondents were requested to make certain that they did not report accumulated depreciation or depletion.

EMPLOYEES FOR PAY PERIOD INCLUDING MARCH 12

This item includes all full-time and part-time employees on the payrolls of establishments during any part of the pay period which included the 12th of March. Included are

all persons on paid sick leave, paid holidays, and paid vacations during this pay period. A distribution of those employees who work in units that serve manufacturing, distribution, or construction operations also carried on at the mining establishment in addition to the minerals operation is also included. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, Development, and Exploration Workers

This item includes workers (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial and guard services, auxiliary production for use at establishments (e.g., power plant), recordkeeping, and other services closely associated with these production operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. Employees above the working-supervisor level are excluded from this item.

All Other Employees

This item covers nonproduction employees of the mining establishment including those engaged in the following activities: supervision above the working-supervisor level, sales, highway trucking (by employees not entering mines or pits), advertising, credit, collection, clerical and routine office functions, executive, purchasing, financing, legal, personnel (including cafeteria, medical, etc.), professional (such as engineers and geologists), and technical activities. Also included are employees on the payroll of the mining establishment engaged in the construction of major additions or alterations utilized as a separate work force. Workers engaged in regular maintenance and repair operations are not included here but are classified as production, development, and exploration workers.

FRINGE BENEFITS

Fringe benefits include both legally required expenditures and payments for voluntary programs. The legally required portion consists primarily of Federal old age and survivors' insurance, unemployment compensation, and workers' compensation. Payments for voluntary programs include all programs not specifically required by legislation whether they were employer initiated or the result of collective bargaining. They include the employer portion of such plans as insurance premiums, premiums for

supplemental accident and sickness insurance, pension plans, supplemental unemployment compensation, welfare plans, stock purchase plans on which the employer payment is not subject to withholding tax, and deferred profit-sharing plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

GROSS VALUE OF DEPRECIABLE AND/OR DEPLETABLE ASSETS AT BEGINNING OF YEAR (BOY) AND END OF YEAR (EOY)

Total value of depreciable and/or depletable assets is collected on all census forms except for the crude petroleum and natural gas form. This item shows the value of depreciable and/or depletable assets for the beginning and end of year. The data encompass all depreciable and/or depletable assets on the books of establishments. The values shown (book value) represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation). Included are all buildings, structures, machinery, equipment (production, office, and transportation equipment), capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion reserves are maintained.

The definition of depreciable and/or depletable assets is consistent with the definition of capital expenditures. For example, expenditures include actual capital outlays during the year rather than the final value of equipment put in place and buildings completed during the year. Accordingly, the value of assets at the end of the year includes the value of construction in progress.

In addition, respondents were requested to make certain that assets at the beginning of the year plus capital expenditures, less retirements, equaled assets at the end of the year.

LEASE RENTS

This item represents the lease rents paid by the establishment for mineral properties. It was not collected on the short form or for the crude petroleum and natural gas, natural gas liquids, and the support activities for mining industries.

NUMBER OF ESTABLISHMENTS AND COMPANIES

A separate report was required for each mining establishment of firms with one employee or more. An establishment is defined as a single physical location where mining is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

If the company operated at different physical locations, even if the individual locations were producing the same mineral product, a separate report was requested for each location. If the company operated in two or more distinct lines of activity at the same location, a separate report was requested for each activity.

For the crude petroleum and support activities for mining industries, the basis for reporting is different from the establishment basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level.

An establishment not in operation for any portion of the year was requested to return the report form with the proper notation in the "Operational Status" section of the form. In addition, the establishment was requested to report data on any employees, capital expenditures, inventories, or shipments from inventories during the year.

PRODUCT CODES AND CLASSES OF PRODUCTS

NAICS United States industries are identified by a six-digit code, in contrast to the four-digit SIC code. The longer code accommodates the large number of sectors and allows more flexibility in designing subsectors. Each product or service is assigned a ten-digit code. The product coding structure represents an extension by the Census Bureau of the six-digit industry classifications of the manufacturing and mining sectors. The classification system operates so that the industrial coverage is progressively narrower with the successive addition of digits. This is illustrated as follows:

NAICS level	NAICS code	Description
Industry	21111	Oil and gas extraction
U.S. industry	211111	Crude petroleum and natural gas extraction
Product class	2111111	Crude petroleum, including lease condensate
BLS link code	2111111X	
Product code	2111111XXX	

As in previous censuses, data were collected for most industries on the quantity and value of individual products shipped. In the new system, there are 61 product classes (seven-digit codes) and almost 150 census products (ten-digit codes). The ten-digit products are considered the primary products of the industry with the same first six digits.

The list of products for which separate information was collected was prepared after consultation with industry and government representatives. Comparability with previous figures was given considerable weight in the selection of product categories so that comparable 1992 information is presented for most products.

Typically, both quantity and value of shipments or receipts information were collected. However, if quantity was not significant or could not be reported, only value of shipments and receipts was collected. Shipments include both commercial shipments and transfers of products to other plants of the same company.

PRODUCTION, DEVELOPMENT, AND EXPLORATION WORKER HOURS

This item covers hours worked or paid for at the establishment, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave. Also excluded are hours worked by employees of contractors.

QUANTITY OF ELECTRIC ENERGY CONSUMED FOR HEAT AND POWER

Data on the quantity and cost of purchased electric energy were collected on all census forms, except for the short forms. In addition, information is collected on the quantity of electric energy generated by the establishment and the quantity of electric energy sold or transferred to other plants of the same company.

RENTAL PAYMENTS

Total rental payments are collected on all census forms. This item includes rental payments for the use of all items for which depreciation reserves would be maintained if they were owned by the establishment, e.g., structures and buildings, machinery, and production, office, and transportation equipment. Excluded are royalties and other payments for the use of intangibles and depletable assets and land rents where separable.

When an establishment of a multiestablishment company was charged rent by another part of the same company for the use of assets owned by the company, it was instructed to exclude that cost from rental payments. However, the book value (original cost) of these company-owned assets was to be reported as assets of the establishment at the end of the year.

If there were assets at an establishment rented from another company and the rents were paid centrally by the head office of the establishment, the company was instructed to report these rental payments as if they were paid directly by the establishment.

RETIREMENTS OF DEPRECIABLE AND/OR DEPLETABLE ASSETS

Included in this item is the gross value of assets sold, retired, scrapped, destroyed, etc., during the calendar year. When a complete operation or establishment

changed ownership, the respondent was instructed to report the value of the assets sold at the original cost as recorded in the books of the seller. The respondent also was requested to report retirements of equipment or structures owned by a parent company that the establishment was using as if it were a tenant.

VALUE ADDED BY MINING

This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments and receipts (mining products plus receipts for services rendered) and capital expenditures. The result of this calculation is adjusted by the addition of value added by merchandising operations (i.e., the difference between the sales value and the cost of products sold without further processing).

“Value added” avoids the duplication in the figure for value of shipments and receipts that results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. Value added is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

VALUE OF SHIPMENTS AND RECEIPTS

This item covers the net selling values, f.o.b. mine or plant after discounts and allowances (exclusive of freight and excise taxes), of all products shipped, both primary and secondary, as well as all miscellaneous receipts, such as installation and repair, sales of scrap, and sales of products bought and sold without further processing. Included are all products physically shipped by the establishments, whether sold, transferred to other plants of the same company, or shipped on consignment. For products transferred to other establishments of the same company, or prepared on a custom or toll basis, companies were requested to report the estimated value, not merely the cost of producing the product. In the case of multiunit companies, the mineral operation was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, including not only the direct cost of production but also a reasonable proportion of “all other costs” (including company overhead) and profit.

In addition to the value for North American Industry Classification System (NAICS) defined products, aggregates of the following categories of miscellaneous receipts are reported as part of a total establishment’s value of shipments and receipts:

1. **Receipts for services.** Receipts for work or services that an establishment performed for others.
2. **Value of resales.** Sales of products brought and sold without further processing.
3. **Other miscellaneous receipts.** Such as repair work, installation, sales of scrap, etc.

Industry primary product value of shipments represents one of the three components of value of shipments. Those components are:

1. Primary products value of shipments.
2. Secondary products value of shipments and receipts for services.
3. Value of resales.

The term “value of primary products shipments or services produced in this industry” is used in this publication and refers to the same data.

An establishment is classified in a particular NAICS industry if its shipments of primary products of that industry exceed in value its shipments of the products of any other single industry.

An establishment’s value of shipments and receipts include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), receipts for services and miscellaneous activities, and the value of resales.

Value of product shipments represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining and manufacturing establishments regardless of their industry classification.

Duplication in Cost of Supplies, Etc., and Value of Shipments and Receipts

The aggregate of the cost of supplies, etc., and value of shipments and receipts figures for industry groups and all mining industries includes some duplication since the products of some industries are used as supplies by others. Some duplication exists because of the inclusion of minerals transferred from one establishment to another for mineral preparation or resale.

Duplication may also exist within the products of some individual industries where minerals shipped for preparation are also reported as the prepared product by another establishment.

Appendix B.

NAICS Codes, Titles, and Descriptions

213115 SUPPORT ACTIVITIES FOR NONMETALLIC MINERALS (EXCEPT FUELS)

This U.S. industry comprises establishments primarily engaged in providing support services, on a fee or contract basis, required for the mining and quarrying of nonmetallic minerals and for the extraction of nonmetallic minerals. Exploration for minerals is included in this

industry. Exploration (except geophysical surveying and mapping services) includes traditional prospecting methods, such as taking core samples and making geological observations at prospective sites.

The data published with NAICS code 213115 include the following SIC industry:

1481 Nonmetallic minerals services, except fuels (pt)

Appendix C.

Coverage and Methodology

MAIL/NONMAIL UNIVERSE

The mining universe includes about 25,000 establishments. This number includes those industries in the NAICS definition of mining, but not those portions of industries leaving the mining sector in the classification change. The amounts of information requested from mining establishments were dependent on a number of factors. The most important consideration was the size of the company. The methods of obtaining information for the various subsets of the universe to arrive at the aggregate figures shown in the publication are described below:

1. Small single-establishment companies not sent a report form.

Approximately 40 percent of the mining establishments were small single-establishment companies that were excused from filing a census report. Selection of these establishments was based on two factors: annual payroll and our ability to assign the correct six-digit NAICS industry classification to the establishment. For each four-digit Standard Industrial Classification (SIC) industry code, an annual payroll cut-off was determined. These cutoffs were derived so that the establishments with payroll less than the cutoff were expected to account for no more than 3 percent of the value of shipments and receipts for the industry. Generally, all single-establishment companies with less than 5 employees were excused, while all establishments with more than 20 employees were mailed forms. Establishments below the cutoff that could not be directly assigned a six-digit NAICS code were mailed a classification report which requested information for assigning NAICS industry codes. Establishments below the cut-off that could be directly assigned a six-digit NAICS code were excused from filing any report. For below-cut-off establishments, information on the physical location, payroll, and receipts was obtained from the administrative records of other Federal agencies under special arrangements which safeguarded their confidentiality.

Estimates of data for these small establishments were developed using industry averages in conjunction with the administrative information. The value of shipments and receipts, cost of supplies, etc., and cost of fuels were not distributed among specific products, supplies, and fuels for these establishments but were included in the product, supplies, and fuels "not specified by kind" (nsk) categories.

The industry classification codes included in the administrative-record files were assigned on the basis of brief descriptions of the general activity of the establishment. As a result, an indeterminate number of establishments were erroneously coded to a four-digit SIC industry and then erroneously recoded to a six-digit NAICS industry. This was especially true whenever there was a relatively fine line of demarcation between industries or between mining and non-mining activity.

Sometimes the administrative-record cases had only two- or three-digit SIC group classification codes available in the files. For the 1997 Economic Census—Mining, these establishments were sent a separate classification form, which requested information on the products and services of the establishment. This form was used to code many of these establishments to the appropriate six-digit NAICS level. Establishments that did not return the classification form were coded later to those six-digit NAICS industries identified as a default within the given subsector.

As a result of these situations, a number of small establishments may have been misclassified by industry. However, such possible misclassification has no significant effect on the statistics other than on the number of companies and establishments.

The total establishment count for individual industries should be viewed as an approximation rather than a precise measurement. The counts for establishments with 20 employees or more are far more reliable than the count of total number of establishments.

2. Establishments sent a report form.

The establishments covered in the mail canvass were divided into two groups:

- a. Large and medium size establishments.

Approximately 48 percent of all mining establishments were included in this group. A variable cutoff, based on administrative-record payroll data and determined on an industry-by-industry basis, was used to select those establishments that were to receive 1 of the 10 economic census – mining regular forms. The first four pages, requesting establishment data for items, such as employment and payroll, costs, assets, and capital expenditures, were fairly standard although some variation occurred depending on the industries collected on

the form. The remaining pages of the form contained product, supply, fuel, and special inquiries. The diversity of the mining activities necessitated the use of several forms to canvass the 29 mining industries. Each form was developed for a group of industries.

b. Small single-establishment companies.

This group included approximately 12 percent of all mining establishments. For those industries where application of the variable cutoff for administrative-record cases resulted in a large number of small establishments being included in the mail canvass, an abbreviated or short form was used. Establishments in the crushed stone, sand and gravel, and crude petroleum and natural gas industries with 5 to 19 employees received 1 of 2 versions of the short form. The form requested summary product and material data and totals but no details on payrolls, cost of supplies and fuels, assets, and capital expenditures.

Use of the short form has no adverse effect on published totals for the industry statistics because the same data were collected on the short form as on the long form. However, detailed information on products, supplies, and fuels was not collected on the short form; thus, its use would increase the value of the nsk categories.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the 1997 Economic Census – Mining was classified in 1 of 29 mineral industries in accordance with the industry definitions in the 1997 NAICS manual. This is the first edition of the NAICS manual and is a major change from the 1987 SIC manual that was used in the past. Appendix A of the 1997 NAICS manual notes the comparability between the 1987 SIC and the 1997 NAICS classification systems. When applicable, Appendix G of this report shows the product comparability between the two systems for the data in this report.

In the NAICS system, an industry is generally defined as establishments grouped according to similarity in the processes used to produce the mineral products. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of its number, value added by mining, value of shipments and receipts, number of employees, and payroll.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the mining sector for 1997, there are 3 subsectors (three-digit NAICS), 5 industry groups (four-digit NAICS), and 10 NAICS industries (5-digit NAICS) that are comparable with Canadian and Mexican classification and 29 U.S. industries (six-digit

NAICS). This represents a slight reduction of the four-digit SIC-based U.S. industries from 31 in 1987. Within industries, there are 141 seven-digit product classes and 196 ten-digit products. The ten-digit products are considered the primary products of the industry with the same first six digits.

For the 1997 Economic Census – Mining, all establishments were classified in particular industries based on the products they produced. If an establishment made products of more than one industry, it was classified in the industry with the largest product value.

Establishments frequently make products classified both in their industry (primary products) and other industries (secondary products). Industry statistics (employment, payroll, value added by mining, value of shipments and receipts, etc.) reflect the activities of the establishments which may make both primary and secondary products. Product statistics, however, represent the output of all establishments without regard for the classification of the producing establishment. For this reason, when relating the industry statistics (especially the value of shipments and receipts) to the product statistics, the composition of the industry's output should be considered.

ESTABLISHMENT BASIS OF REPORTING

The 1997 Economic Census – Mining covers each mining establishment of firms with one or more paid employees operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mining establishment is defined as a single physical location where mineral operations are conducted. However, a company engaged in distinctly different lines of activity at one location is required to submit a separate report for each activity if the plant records permit such a separation and if the activities are substantial in size.

For oil and gas field operations and for contract services, the basis for reporting is different from the "establishment" basis used for other types of mining. Firms operating oil and gas wells, drilling wells, or exploring for oil and gas for their own account were required to submit a separate report for each state or offshore area adjacent to a state in which it conducted such activities. Firms that performed contract services for oil and gas field operations or for mining establishments were required to submit one report covering all such activities in the United States and to include information on receipts for services and production-worker wages and hours by state. These consolidated reports were then allocated to state establishments based on the data reported at the state level. The 1997 figures for establishments include the summation of operations for each state allocated from these nationwide reports.

In the 1997 Economic Census – Mining, as in censuses since 1967, data for single-unit firms without paid employees were excluded. This exclusion had only a slight

effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than \$500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

The 1997 Economic Census – Mining excludes data for central administrative offices. Statistics for employment and payroll for individual industries and industry groups no longer include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. These data are included in a separate report series.

DUPLICATION IN COST OF MATERIALS AND VALUE OF SHIPMENTS

Data for cost of materials and value of shipments include varying amounts of duplication, especially at higher levels of aggregation. This is because the products of one establishment may be the materials of another. The value added statistics avoid this duplication and are, for most purposes, the best measure for comparing the relative economic importance of industries and geographic areas.

VALUE OF INDUSTRY SHIPMENTS COMPARED WITH VALUE OF PRODUCT SHIPMENTS

The 1997 Economic Census – Mining shows value of shipments and receipts data for industries and products. In the industry statistics tables and files, these data represent the total value of shipments of all establishments classified in a particular industry. The data include the shipments of the products classified in the industry (primary to the industry), products classified in other industries (secondary to the industry), and miscellaneous receipts (repair work, sale of scrap, research and development, installation receipts, and resales). Value of product shipments shown in the products statistics tables and files represent the total value of all products shipped that are classified as primary to an industry regardless of the classification of the producing establishment. The value of products shipped also may include some products shipped from manufacturing establishments with mining operations.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Footnotes for Products or Services Statistics, and Supplies and Fuels Consumed by Type

Part 1. Products or Services Statistics (Table 6a)

NAICS product or service code	Footnote
# 2131150Y	Includes contract services performed by mine operators classified in nonmetallic minerals (except fuels) mining industries.
# 2131150YWT	Includes value for establishments that did not report detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

Part 2. Supplies, Minerals Received for Preparation, Purchased Machinery, and Fuels Consumed by Type (Table 7)

NAICS supply or fuel code	Footnote
# 00973000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.
# 00974000	Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Appendix G.

Comparability of Product Classes and Product Codes: 1997 to 1992

1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published	1997 published	1997 collected	1992 published
2131110	13810	13810	2131122551	1389013	1389013	2131130261	1241017	1241017
2131110111	1381011	1381011	2131122561	1389025	1389025	2131130291	1241019	1241019
2131110221	1381012	1381012	2131122571	1389026	1389026	2131130YWT	1241000	1241000
2131110231	1381014	1381014	2131122581	1389035	1389035	2131140	10810 pt	10810 pt
2131110341	1381015	1381015	2131122591	1389036	1389036	2131140111	1081010	1081011 pt
2131110YWT	1381000	1381000	2131122YVV	13890XX	13890XX	2131140221	1081014	1081014
2131121	13820 pt	13820 pt	213112W pt	13820 pt	13820 pt	2131140331	1081013	1081013
2131121111	1382010	1382011 pt	213112W pt	13890 pt	13890 pt	2131140341	1081017	1081017
2131121191	1382013	1382013	213112WYWT pt	1382000 pt	1382000 pt	2131140391	1081018	1081018
2131121YVV	13820XX	13820XX	213112WYWT pt	1389000	1389000	2131140YWT	1081000 pt	1081000 pt
2131122	13890 pt	13890 pt	2131130	12410	12410	2131150	14810 pt	14810 pt
2131122111	1389011	1389011	2131130111	1241014	1241014	2131150111	1481014	1481014
2131122215	1389014	1389014	2131130221	1241012	1241012	2131150221	1481012	1481012
2131122321	1389021	1389021	2131130231	1241013	1241013	2131150231	1481013	1481013
2131122431	1389024	1389024	2131130241	1241015	1241015	2131150241	1481015	1481015
2131122541	1389012	1389012	2131130251	1241016	1241016	2131150291	1481018	1481019 pt
						2131150YWT	1481000 pt	1481000 pt

