

# Product Summary

# 1997

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## 1997 Economic Census

*Mining*

Subject Series



# U.S. CENSUS BUREAU

*Helping You Make Informed Decisions*

U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU



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-- Not applicable for this report.

# Introduction to the Economic Census

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## 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

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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](http://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.

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## 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](http://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](http://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

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## 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:

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## 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. 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)
<b>211111</b>	<b>Crude petroleum and natural gas</b> .....	<b>X</b>	<b>X</b>	<b>77 300 748</b>	<b>X</b>	<b>X</b>	<b>71 607 669</b>
2111111	Crude petroleum, including lease condensate (volumes corrected to 60 degrees F) shipped .....	X	X	34 998 081	X	X	36 628 076
21111111	Crude petroleum, including lease condensate (volumes corrected to 60 degrees F) shipped .....	X	X	34 998 081	X	X	N
2111111111	Crude petroleum, including lease condensate (volumes corrected to 60 degrees F) shipped .....	X	1 990.7	34 998 081	X	2 510.3	36 628 076
2111111121	Crude petroleum shipped from stripper well leases .....	X	108.1	X	X	183.8	X
2111111131	Lease condensate produced (volumes corrected to 60 degrees F) .....	X	147.4	X	X	126.9	X
21111113	Natural gas .....	X	X	34 514 366	X	X	27 775 106
21111131	Natural gas .....	X	X	34 514 366	X	X	N
2111113100	Natural gas (volumes adjusted to pressure base of 14.73 lb absolute at 60 degrees F) shipped to consumers .....	X	14 606.2	34 514 366	X	16 005.1	27 775 106
211111W	Crude petroleum and natural gas, nsk .....	X	X	7 788 301	X	X	7 204 487
211111WY	Crude petroleum and natural gas, nsk .....	X	X	7 788 301	X	X	N
211111WYWT	Crude petroleum and natural gas, nsk # .....	X	X	7 788 301	X	X	7 204 487
<b>211112</b>	<b>Natural gas liquids</b> .....	<b>X</b>	<b>X</b>	<b>25 147 053</b>	<b>X</b>	<b>X</b>	<b>27 401 025</b>
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 .....	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 .....	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 .....	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 .....	14.4	14.6	259 687	10.7	10.7	177 395
2111121451	Ethane .....	198.9	198.7	1 738 885	193.6	192.1	1 662 572
2111121461	Gas mixtures from natural gas liquids plants .....	27.0	26.8	423 481	17.1	17.4	225 807
2111121491	Other natural gas liquids .....	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 .....	X	6 595.1	15 810 792	X	10 339.6	17 803 960
211112W	Natural gas liquids, nsk .....	X	X	152 069	X	X	186 009
211112WY	Natural gas liquids, nsk .....	X	X	152 069	X	X	N
211112WYWT	Natural gas liquids, nsk # .....	X	X	152 069	X	X	186 009
<b>212111</b>	<b>Bituminous coal and lignite from surface operations #</b> .....	<b>X</b>	<b>X</b>	<b>12 333 441</b>	<b>X</b>	<b>X</b>	<b>13 689 516</b>
2121111	Run-of-mine (raw) bituminous coal and lignite shipped from surface mining operations .....	X	X	1 637 862	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	531 756	X	X	N
2121111111	Run-of-mine (raw) bituminous coal and lignite shipped from surface mining operations, for use without processing .....	X	25.0	531 756	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	1 106 106	X	X	N
2121111221	Run-of-mine (raw) bituminous coal and lignite shipped from surface mining operations, for processing at other establishments .....	X	67.9	1 106 106	X	67.2	1 172 025
2121113	Processed bituminous coal and lignite shipped from surface operations .....	X	X	10 222 212	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	2 675 786	X	X	N
2121113221	Processed bituminous coal shipped from surface operations (mechanically crushed, screened, or sized only) .....	X	114.2	2 675 786	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	473 367	X	X	1 041 165
212111WY	Bituminous coal and lignite surface mining, nsk .....	X	X	473 367	X	X	N
212111WYWT	Bituminous coal and lignite surface mining, nsk # .....	X	X	473 367	X	X	1 041 165

**Table 1. Products or Services Statistics: 1997 and 1992—Con.**

[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)
<b>212112</b>	<b>Bituminous coal from underground operations #</b> .....	<b>X</b>	<b>X</b>	<b>10 710 228</b>	<b>X</b>	<b>X</b>	<b>12 451 786</b>
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	344 913	X	X	511 709
212112WY	Bituminous coal underground mining, nsk .....	X	X	344 913	X	X	N
212112WYWT	Bituminous coal underground mining, nsk # .....	X	X	344 913	X	X	511 709
<b>212113</b>	<b>Anthracite #</b> .....	<b>X</b>	<b>X</b>	<b>174 302</b>	<b>X</b>	<b>X</b>	<b>150 941</b>
2121131	Run-of-mine (raw) anthracite .....	X	X	49 632	X	X	20 327
21211311	Run-of-mine (raw) anthracite shipped .....	X	X	49 632	X	X	N
2121131111	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	2 198.3	42 211	X	826.4	20 327
2121133	Processed anthracite .....	X	X	112 487	X	X	117 126
21211331	Processed anthracite shipped .....	X	X	112 487	X	X	N
2121133111	Processed anthracite, washed by wet-washing, pneumatic, or other methods .....	X	1 514.6	95 823	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
<b>212210</b>	<b>Iron ore #</b> .....	<b>X</b>	<b>X</b>	<b>1 915 930</b>	<b>X</b>	<b>X</b>	<b>1 715 217</b>
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	.7	.6	4 677
2122101121	Crude iron ore for treatment, concentration, etc. ....	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 .....	.4	.4	17 768	.6	.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
212210WYWT	Iron ores, nsk # .....	X	X	D	X	X	D
<b>212221</b>	<b>Gold ore</b> .....	<b>X</b>	<b>X</b>	<b>3 932 918</b>	<b>X</b>	<b>X</b>	<b>3 418 006</b>
2122211	Crude lode gold ores .....	X	X	D	X	X	D
21222111	Crude lode gold ores .....	X	X	D	X	X	N
2122211111	Crude lode gold ores mined .....	275 506.6	X	X	339 470.2	X	X
2122211121	Crude lode gold ores and residues shipped to smelters .....	X	-	-	X	D	D
2122211131	Crude lode gold ores and residues shipped to mills .....	X	D	D	X	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 .....	190.3	204.3	164 483	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 .....	2 333.3	2 322.7	23 881	5 048.4	5 014.1	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

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		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)
<b>212222</b>	<b>Silver ore</b> .....	<b>X</b>	<b>X</b>	<b>130 309</b>	<b>X</b>	<b>X</b>	<b>110 368</b>
2122221	Crude silver ores .....	X	X	—	X	X	D
21222211	Crude silver ores .....	X	X	—	X	X	N
2122221111	Crude silver ores mined .....	1,000 metric tons..	X	X	D	X	X
2122221121	Crude silver ores and residues shipped to smelters .....	1,000 metric tons..	X	—	X	D	D
2122221131	Crude silver ores and residues shipped to mills .....	1,000 metric tons..	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 .....	1,000 metric tons..	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 .....	kilograms..	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
<b>212231</b>	<b>Lead and zinc ores</b> .....	<b>X</b>	<b>X</b>	<b>528 153</b>	<b>X</b>	<b>X</b>	<b>496 635</b>
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	13.5	X	X
2122311121	Crude lead and zinc ores and residues shipped to smelters .....	mil metric tons..	X	D	X	—	—
2122311131	Crude lead and zinc ores and residues shipped to mills .....	mil metric tons..	X	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..	.6	144 725	D	D	D
2122313121	Zinc concentrates .....	mil metric tons..	.9	333 462	1.0	.9	360 928
212231W	Lead and zinc ores, nsk .....	X	X	2 330	X	X	1 353
212231WY	Lead and zinc ores, nsk .....	X	X	2 330	X	X	N
212231WYWT	Lead and zinc ores, nsk # .....	X	X	2 330	X	X	1 353
<b>212234</b>	<b>Copper and nickel ores</b> .....	<b>X</b>	<b>X</b>	<b>3 860 608</b>	<b>X</b>	<b>X</b>	<b>N</b>
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	597.5	X	X
2122341121	Crude copper ores and residues shipped to smelters .....	mil metric tons..	X	D	X	—	—
2122341131	Crude copper ores and residues shipped to mills .....	mil metric tons..	X	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	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
2122345121	Electrowon copper recovered from leaching operations .....	1,000 metric tons..	581.9	579.7	1 237 618	444.5	464.5
212234W	Copper ores, nsk, and nickel ores and concentrates .....	X	X	8 028	X	X	N
212234WY	Copper ores, nsk, and nickel ores and concentrates .....	X	X	8 028	X	X	N
212234WYWT	Copper ores, nsk, and nickel ores and concentrates # .....	X	X	8 028	X	X	N
<b>212291</b>	<b>Uranium-radium-vanadium ores</b> .....	<b>X</b>	<b>X</b>	<b>85 561</b>	<b>X</b>	<b>X</b>	<b>86 187</b>
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 .....	1,000 metric tons..	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 # .....	1,000 metric tons..	D	D	N	N	N
2122913121	Vanadium concentrates .....	1,000 metric tons..	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

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		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)
<b>212299</b>	<b>All other metal ores .....</b>	<b>X</b>	<b>X</b>	<b>717 489</b>	<b>X</b>	<b>X</b>	<b>N</b>
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
212299311	Crude ferroalloy ores, such as manganese and manganiferous ores, chromium, molybdenum, tungsten, etc. (except vanadium and nickel) .....	18 547.7	D	D	N	N	N
2122993121	Molybdenum concentrates ..... 1,000 metric tons cont. moly ..	50.0	52.6	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 # .....	S	S	267 569	N	N	N
212299W	Other metal ores, nsk .....	X	X	11 386	X	X	N
212299WY	Other metal ores, nsk .....	X	X	11 386	X	X	N
212299WYWT	Other metal ores, nsk # .....	X	X	11 386	X	X	N
<b>212311</b>	<b>Dimension stone .....</b>	<b>X</b>	<b>X</b>	<b>137 388</b>	<b>X</b>	<b>X</b>	<b>107 423</b>
2123110	Dimension stone .....	X	X	137 388	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) .....	319.7	316.6	30 837	X	114.9	13 230
2123110Y	Dimension stone, nsk .....	X	X	17 704	X	X	N
2123110YWT	Dimension stone, nsk # .....	X	X	17 704	X	X	22 021
<b>212312</b>	<b>Limestone .....</b>	<b>X</b>	<b>X</b>	<b>4 461 110</b>	<b>X</b>	<b>X</b>	<b>3 099 070</b>
2123120	Crushed and broken limestone .....	X	X	4 461 110	X	X	3 099 070
21231201	Crushed and broken limestone .....	X	X	4 461 110	X	X	N
2123120100	Crushed and broken limestone ..... mil s tons ..	954.9	931.8	4 461 110	696.9	668.5	3 099 070
<b>212313</b>	<b>Granite .....</b>	<b>X</b>	<b>X</b>	<b>1 522 411</b>	<b>X</b>	<b>X</b>	<b>900 918</b>
2123130	Crushed and broken granite .....	X	X	1 522 411	X	X	900 918
21231301	Crushed and broken granite .....	X	X	1 522 411	X	X	N
2123130100	Crushed and broken granite ..... mil s tons ..	255.8	246.5	1 522 411	175.6	172.3	900 918
<b>212319</b>	<b>Other stone .....</b>	<b>X</b>	<b>X</b>	<b>1 307 851</b>	<b>X</b>	<b>X</b>	<b>N</b>
2123190	Bituminous limestone, bituminous sandstone, and other crushed and broken stone .....	X	X	1 307 851	X	X	N
21231901	Bituminous limestone, bituminous sandstone, and other crushed and broken stone .....	X	X	1 307 851	X	X	N
2123190111	Bituminous limestone and bituminous sandstone ..... 1,000 metric tons ..	2 954.1	2 904.4	18 108	N	N	N
2123190121	Other crushed and broken stone ..... mil s tons ..	228.7	214.8	1 289 743	161.8	159.6	950 806
2123190Y	Bituminous limestone, bituminous sandstone, and other crushed and broken stone, nsk .....	X	X	—	X	X	N
2123190YWT	Bituminous limestone, bituminous sandstone, and other crushed and broken stone, nsk # .....	X	X	—	X	X	N
<b>212321</b>	<b>Construction sand and gravel .....</b>	<b>X</b>	<b>X</b>	<b>3 754 899</b>	<b>X</b>	<b>X</b>	<b>2 998 264</b>
2123211	Construction sand and gravel (run of pit or bank) .....	X	X	350 879	X	X	229 642
21232111	Construction sand and gravel (run of pit or bank) .....	X	X	350 879	X	X	N
2123211111	Construction sand (run of pit or bank) ..... mil s tons ..	51.3	48.1	170 767	45.7	44.4	115 280
2123211121	Construction gravel (run of pit or bank) ..... mil s tons ..	53.5	48.1	180 112	40.4	39.5	114 362
2123213	Construction sand and gravel (washed, screened, or otherwise treated) .....	X	X	1 962 079	X	X	1 650 664
21232131	Construction sand (washed, screened, or otherwise treated) .....	X	X	939 537	X	X	N
2123213111	Construction sand (washed, screened, or otherwise treated) ..... mil s tons ..	226.3	216.6	939 537	198.6	194.5	755 233
21232132	Construction gravel (washed, screened, or otherwise treated) .....	X	X	1 022 542	X	X	N
2123213221	Construction gravel (washed, screened, or otherwise treated) ..... mil s tons ..	203.8	196.0	1 022 542	212.3	204.4	895 431
212321W	Construction sand and gravel, nsk # .....	X	X	1 441 941	X	X	1 117 958
212321WY	Construction sand and gravel, nsk .....	X	X	1 441 941	X	X	N
212321WYWT	Construction sand and gravel, nsk # .....	X	X	1 441 941	X	X	1 117 958

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<b>212322</b>	<b>Industrial sand</b> .....	<b>X</b>	<b>X</b>	<b>501 773</b>	<b>X</b>	<b>X</b>	<b>413 888</b>
2123221	Industrial glass sand .....	X	X	218 913	X	X	177 949
21232211	Industrial glass sand .....	X	X	218 913	X	X	N
2123221100	Industrial glass sand .....	13.6	13.4	218 913	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	24 473	X	X	28 135
212322WY	Industrial sand, nsk .....	X	X	24 473	X	X	N
212322WYWT	Industrial sand, nsk # .....	X	X	24 473	X	X	28 135
<b>212324</b>	<b>Kaolin and ball clay</b> .....	<b>X</b>	<b>X</b>	<b>893 021</b>	<b>X</b>	<b>X</b>	<b>749 891</b>
2123240	Kaolin and ball clay .....	X	X	893 021	X	X	N
21232401	Kaolin and ball clay .....	X	X	893 021	X	X	N
2123240111	Kaolin .....	X	9 817.1	841 313	X	N	N
2123240121	Ball clay .....	X	1 093.2	51 708	X	N	N
2123240YWT	Kaolin and ball clay, nsk # .....	X	X	—	X	X	—
<b>212325</b>	<b>Clay, ceramic and refractory minerals</b> .....	<b>X</b>	<b>X</b>	<b>612 199</b>	<b>X</b>	<b>X</b>	<b>611 068</b>
2123251	Bentonite .....	X	X	180 462	X	X	142 490
21232511	Bentonite .....	X	X	180 462	X	X	N
2123251100	Bentonite .....	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 # .....	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 .....	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) .....	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 .....	X	724.8	5 084	X	1 419.2	7 467
2123258121	Prepared common (miscellaneous) clay and shale .....	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 .....	X	1 085.5	61 370	X	1 488.9	84 387
212325W	Other clay, ceramic, and refractory minerals, nsk .....	X	X	12 602	X	X	13 815
212325WY	Other clay, ceramic, and refractory minerals, nsk .....	X	X	12 602	X	X	N
212325WYWT	Other clay, ceramic, and refractory minerals, nsk # .....	X	X	12 602	X	X	13 815
<b>212391</b>	<b>Potash, soda, and borate</b> .....	<b>X</b>	<b>X</b>	<b>1 689 575</b>	<b>X</b>	<b>X</b>	<b>1 505 528</b>
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 .....	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) .....	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



**Table 1. Products or Services Statistics: 1997 and 1992—Con.**

[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)
<b>212392</b>	<b>Phosphate rock #</b> .....	<b>X</b>	<b>X</b>	<b>1 006 370</b>	<b>X</b>	<b>X</b>	<b>1 193 904</b>
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	X	X	N
2123921100	Crude phosphate rock (ore or matrix) ..... mil metric tons (dry basis) ..	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	X	X	N
2123923111	Washed and concentrated phosphate rock shipments ..... mil metric tons (dry basis) ..	D	D	D	N	N	N
2123923131	Dried, calcined, sintered, or nodulized phosphate rock ..... mil metric tons (dry basis) ..	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
<b>212393</b>	<b>Other chemical and fertilizer minerals</b> .....	<b>X</b>	<b>X</b>	<b>353 568</b>	<b>X</b>	<b>X</b>	<b>410 875</b>
2123931	Barite .....	X	X	D	X	X	12 969
21239311	Barite .....	X	X	D	X	X	N
2123931100	Barite ..... 1,000 metric tons ..	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 # ..... 1,000 s tons ..	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 ..... 1,000 metric tons ..	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
<b>212399</b>	<b>All other nonmetallic minerals</b> .....	<b>X</b>	<b>X</b>	<b>637 868</b>	<b>X</b>	<b>X</b>	<b>N</b>
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 ..... 1,000 metric tons ..	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 # ..... mil s tons ..	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 # ..... 1,000 metric tons ..	1 169.5	1 084.1	95 630	N	N	N
2123999	Other nonmetallic minerals .....	X	X	302 103	X	X	N
21239991	Other nonmetallic minerals .....	X	X	302 103	X	X	N
2123999111	Mica ..... 1,000 metric tons ..	111.6	108.1	9 374	132.8	132.9	21 310
2123999121	Native asphalt and bitumens (except bituminous limestone and bituminous sandstone) # ..... 1,000 metric tons ..	448.4	448.5	19 044	N	N	N
2123999131	Pumice and pumicite # ..... 1,000 metric tons ..	662.2	687.1	20 314	1 036.6	934.6	26 036
2123999141	Natural abrasives, except sand ..... 1,000 metric tons ..	55.1	56.2	21 987	70.3	68.0	18 684
2123999151	Peat ..... 1,000 s tons ..	459.1	402.8	12 850	532.4	511.5	15 777
2123999161	Perlite ..... 1,000 s tons ..	840.5	811.7	34 844	755.5	637.7	22 184
2123999171	Shell, crushed or broken # ..... 1,000 s tons ..	1 943.0	1 870.4	10 840	5 480.0	5 041.5	29 925
2123999191	All other nonmetallic minerals # .....	X	X	172 850	X	X	N
212399W	Miscellaneous nonmetallic minerals, nsk .....	X	X	45 113	X	X	N
212399WY	Miscellaneous nonmetallic minerals, nsk .....	X	X	45 113	X	X	N
212399WYWT	Miscellaneous nonmetallic minerals, nsk # .....	X	X	45 113	X	X	N
<b>213111</b>	<b>Drilling oil and gas wells</b> .....	<b>X</b>	<b>X</b>	<b>7 340 122</b>	<b>X</b>	<b>X</b>	<b>3 669 278</b>
2131110	Drilling oil and gas wells .....	X	X	7 340 122	X	X	3 669 278
21311101	Drilling oil, gas, dry, or service wells .....	X	X	5 742 005	X	X	N
2131110111	Drilling oil, gas, dry, or service wells ..... mil ft. ..	X	S	5 742 005	X	150.9	2 229 111
21311102	Drilling in, spudding in, tailing in, or reworking oil and gas wells .....	X	X	799 043	X	X	N
2131110221	Drilling in, spudding in, or tailing in oil and gas wells ..... mil ft. ..	X	4.9	56 993	X	5.8	79 227
2131110231	Reworking oil and gas wells .....	X	X	742 050	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	425 894	X	X	N
2131110YWT	Drilling oil and gas wells, nsk # .....	X	X	425 894	X	X	561 810

**Table 1. Products or Services Statistics: 1997 and 1992—Con.**

[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)
<b>213112</b>	<b>Support activities for oil and gas field operations</b> .....	<b>X</b>	<b>X</b>	<b>10 892 428</b>	<b>X</b>	<b>X</b>	<b>N</b>
2131121	Oil and gas field exploration services .....	X	X	391 818	X	X	N
21311211	Oil and gas field exploration services .....	X	X	391 818	X	X	N
213112111	Oil and gas field geophysical exploration work, except mapping and surveying services .....	X	X	387 831	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	7 844 945	X	X	N
21311221	Cementing oil and gas wells .....	X	X	834 182	X	X	N
2131122111	Cementing oil and gas wells .....	X	X	834 182	X	X	472 276
21311222	Oil and gas well surveying and well logging .....	X	X	1 224 035	X	X	N
2131122215	Oil and gas well surveying and well logging .....	X	X	1 224 035	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	222 579	X	X	N
2131122431	Running, cutting, and pulling casings, tubes, or rods for oil and gas wells .....	X	X	222 579	X	X	333 773
21311225	Other oil and gas field services .....	X	X	4 443 113	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	121 230	X	X	99 410
2131122561	Installing oil and gas field production equipment, such as wellhead fittings, pumps, and engines .....	X	X	113 352	X	X	165 155
2131122571	Cleaning out, bailing out, or swabbing oil and gas wells .....	X	X	211 369	X	X	131 190
2131122581	Pumping oil and gas wells but not operating leases .....	X	X	134 402	X	X	105 661
2131122591	All other oil and gas field services .....	X	X	3 589 988	X	X	2 129 614
213112W	Oil and gas field operations, nsk .....	X	X	2 655 665	X	X	N
213112WY	Oil and gas field operations, nsk .....	X	X	2 655 665	X	X	N
213112WYWT	Oil and gas field operations, nsk # .....	X	X	2 655 665	X	X	N
<b>213113</b>	<b>Support activities for coal mining</b> .....	<b>X</b>	<b>X</b>	<b>585 651</b>	<b>X</b>	<b>X</b>	<b>536 507</b>
2131130	Coal mining services .....	X	X	585 651	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 .....	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 .....	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	141 390	X	X	N
2131130YWT	Coal mining services, nsk # .....	X	X	141 390	X	X	198 881
<b>213114</b>	<b>Support activities for metal mining</b> .....	<b>X</b>	<b>X</b>	<b>332 755</b>	<b>X</b>	<b>X</b>	<b>N</b>
2131140	Metal mining services .....	X	X	332 755	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	192 254	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	7 828	X	X	8 905
2131140Y	Metal mining services, nsk .....	X	X	54 136	X	X	N
2131140YWT	Metal mining services, nsk # .....	X	X	54 136	X	X	N
<b>213115</b>	<b>Support activities for nonmetallic minerals (except fuels)</b> .....	<b>X</b>	<b>X</b>	<b>230 175</b>	<b>X</b>	<b>X</b>	<b>N</b>
2131150	Nonmetallic minerals services (except fuels) .....	X	X	230 175	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	98 369	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	16 765	X	X	N
2131150Y	Nonmetallic minerals services (except fuels), nsk # .....	X	X	81 427	X	X	N
2131150YWT	Nonmetallic minerals services (except fuels), nsk # .....	X	X	81 427	X	X	N

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

**Table 2. Product Class Shipments or Receipts for Services 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 of the Industry Series reports. 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 explanation of terms, see appendixes]

NAICS product or service class code	Product or service class and geographic area	Value of product shipments or receipts for services		NAICS product or service class code	Product or service class and geographic area	Value of product shipments or receipts for services									
		1997 (\$1,000)	1992 (\$1,000)			1997 (\$1,000)	1992 (\$1,000)								
2111111	<b>CRUDE PETROLEUM, INCLUDING LEASE CONDENSATE (VOLUMES CORRECTED TO 60 DEGREES F) SHIPPED</b>			2121113	<b>PROCESSED BITUMINOUS COAL AND LIGNITE SHIPPED FROM SURFACE OPERATIONS—Con.</b>										
	United States .....	34 998 081	36 628 076			Tennessee .....	58 573	33 895							
	California .....	5 890 923	3 591 444			Texas .....	582 300	530 407							
	Colorado .....	484 024	662 541			Virginia .....	522 965	786 581							
	Kansas .....	438 882	822 783			West Virginia .....	1 802 093	1 578 168							
	Louisiana .....	5 791 859	5 523 213		2121121	Wyoming .....	1 672 771	1 467 503							
	Michigan .....	151 523	245 367			<b>RUN-OF-MINE (RAW) BITUMINOUS COAL SHIPPED FROM UNDERGROUND MINING OPERATIONS</b>									
	Mississippi .....	151 970	313 081			United States .....	2 196 694	3 049 268							
	Montana .....	147 581	259 297			Kentucky .....	702 586	878 304							
	Nebraska .....	23 509	52 414			Pennsylvania .....	377 289	418 440							
	New Mexico .....	994 166	956 274			Utah .....	19 598	N							
	North Dakota .....	367 638	407 163			Virginia .....	316 423	541 038							
	Ohio .....	96 450	99 172			West Virginia .....	548 100	875 858							
	Oklahoma .....	1 020 258	1 651 767			2121123	<b>PROCESSED BITUMINOUS COAL SHIPPED FROM UNDERGROUND MINING OPERATIONS</b>								
	Texas .....	7 955 373	10 325 242				United States .....	8 168 621	8 890 809						
Utah .....	323 203	444 774	Alabama .....	694 021			570 106								
Wyoming .....	932 778	1 298 951	Colorado .....	217 983			214 246								
Offshore areas not associated with a state .....	1 267 341	1 057 616	Illinois .....	567 590			969 603								
2111113	<b>NATURAL GAS</b>			Indiana .....			145 337	64 847							
	United States .....	34 514 366	27 775 106	Kentucky .....			1 530 231	1 613 823							
	California .....	842 641	546 299	Ohio .....	420 571		353 939								
	Colorado .....	836 993	508 644	Pennsylvania .....	880 533		1 020 606								
	Kansas .....	1 195 788	886 483	Utah .....	566 812		418 759								
	Louisiana .....	9 402 251	6 782 771	Virginia .....	583 861		718 535								
	Michigan .....	355 622	604 711	West Virginia .....	2 419 384		2 811 609								
	Mississippi .....	91 725	95 011	2121131	<b>RUN-OF-MINE (RAW) ANTHRACITE</b>										
	Montana .....	61 683	48 679		United States .....		49 632	20 327							
	New Mexico .....	2 264 113	1 395 599		Pennsylvania .....		49 632	20 327							
	North Dakota .....	196 491	218 119		2121133	<b>PROCESSED ANTHRACITE</b>									
	Ohio .....	322 598	223 160			United States .....	112 487	117 126							
	Oklahoma .....	2 225 956	2 533 631			Pennsylvania .....	112 487	117 126							
	Texas .....	11 362 711	8 790 611			2122101	<b>CRUDE IRON ORE</b>								
	Utah .....	274 110	149 979				United States .....	D	D						
Wyoming .....	1 677 611	2 225 205	2122103				<b>IRON ORE CONCENTRATES AND AGGLOMERATES</b>								
Offshore areas not associated with a state .....	1 984 834	1 045 920					United States .....	1 838 537	1 686 351						
2111121	<b>NATURAL GAS LIQUIDS</b>							2122211	<b>CRUDE LODE GOLD ORES</b>						
	United States .....	9 184 192					9 411 056		United States .....	D	D				
	California .....	172 066					106 905		2122213	<b>GOLD CONCENTRATES</b>					
	Colorado .....	122 530					104 394			United States .....	164 483	78 988			
	Kansas .....	188 123					665 624			2122215	<b>GOLD MILL BULLION AND PLACER GOLD</b>				
	Louisiana .....	716 713		1 245 878			United States .....				3 631 651	3 277 314			
	New Mexico .....	737 510		565 506			2122221				<b>CRUDE SILVER ORES</b>				
	Oklahoma .....	617 000		654 668							United States .....	-	D		
	Texas .....	5 828 649		5 398 485	2122223						<b>SILVER CONCENTRATES</b>				
	Wyoming .....	433 797		292 861							United States .....	D	D		
	2111123	<b>RESIDUE GAS SHIPPED FROM NATURAL GAS LIQUIDS PLANTS</b>										2122225	<b>SILVER MILL BULLION AND PLACER SILVER</b>		
		United States .....		15 810 792		17 803 960					United States .....		D	D	
		California .....		551 967		188 536					2122311		<b>CRUDE LEAD AND ZINC ORES</b>		
		Colorado .....	329 651	525 407		United States .....							47 636	D	
		Kansas .....	763 826	1 380 142		2122313							<b>LEAD AND ZINC CONCENTRATES</b>		
Louisiana .....		4 942 914	5 895 954	United States .....				478 187					D		
New Mexico .....		1 080 746	918 535	2121111				<b>RUN-OF-MINE (RAW) BITUMINOUS COAL AND LIGNITE SHIPPED FROM SURFACE MINING OPERATIONS</b>							
Oklahoma .....		997 126	1 056 602					United States .....	1 637 862				1 816 557		
Texas .....		5 579 480	5 468 782					Alabama .....	22 981				44 794		
Wyoming .....		837 426	1 598 261					Colorado .....	78 153	40 412					
2121113		<b>PROCESSED BITUMINOUS COAL AND LIGNITE SHIPPED FROM SURFACE OPERATIONS</b>							Illinois .....	8 841			64 638		
		United States .....	10 222 212				10 831 794	Kentucky .....	330 137	567 168					
		Alabama .....	223 177				342 599	Ohio .....	55 344	77 045					
		Illinois .....	305 464		706 221		Pennsylvania .....	161 514	140 665						
		Indiana .....	308 929		607 671		Tennessee .....	9 672	10 560						
	Kentucky .....	1 918 713	1 853 927		Virginia .....		164 978	166 752							
	Montana .....	402 748	414 078		West Virginia .....		585 830	440 409							
	North Dakota .....	235 898	215 593		2121113		<b>PROCESSED BITUMINOUS COAL AND LIGNITE SHIPPED FROM SURFACE OPERATIONS</b>								
	Ohio .....	288 258	357 607				United States .....	10 222 212	10 831 794						
	Pennsylvania .....	708 729	731 123			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									

**Table 2. Product Class Shipments or Receipts for Services for Selected States and Offshore Areas: 1997 and 1992—Con.**

[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 of the Industry Series reports. 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 explanation of terms, see appendixes]

NAICS product or service class code	Product or service class and geographic area	Value of product shipments or receipts for services		NAICS product or service class code	Product or service class and geographic area	Value of product shipments or receipts for services	
		1997 (\$1,000)	1992 (\$1,000)			1997 (\$1,000)	1992 (\$1,000)
2122341	<b>CRUDE COPPER-BEARING ORES</b> United States .....	248 898	204 008	2123213	<b>CONSTRUCTION SAND AND GRAVEL (WASHED, SCREENED, OR OTHERWISE TREATED)—Con.</b> Michigan .....	91 537	76 065
2122343	<b>COPPER CONCENTRATES</b> United States .....	2 340 840	1 982 248		Mississippi .....	32 580	27 382
	Arizona .....	1 536 295	1 230 035		Missouri .....	19 111	15 948
2122345	<b>COPPER PRECIPITATES AND ELECTROWON COPPER RECOVERED FROM LEACHING OPERATIONS</b> United States .....	1 262 842	1 093 062		Nebraska .....	8 323	21 697
2122911	<b>CRUDE URANIUM-VANADIUM ORES</b> United States .....	D	—		Nevada .....	21 085	11 314
2122913	<b>URANIUM-VANADIUM CONCENTRATES</b> United States .....	73 870	45 361		New Hampshire .....	40 236	15 187
2122991	<b>BAUXITE</b> United States .....	D	12 099		New Jersey .....	65 542	49 310
2122993	<b>FERROALLOY ORES, EXCEPT VANADIUM</b> United States .....	D	N		New Mexico .....	10 803	8 398
2122995	<b>MISCELLANEOUS METAL ORES AND CONCENTRATES, SUCH AS ANTIMONY, BERYLLIUM, MERCURY, RARE-EARTH METALS, TIN, AND TITANIUM</b> United States .....	267 569	142 706		New York .....	74 193	61 545
2123211	<b>CONSTRUCTION SAND AND GRAVEL (RUN OF PIT OR BANK)</b> United States .....	350 879	229 642		North Carolina .....	35 456	26 160
	Arkansas .....	4 579	2 628		North Dakota .....	5 304	5 785
	California .....	74 270	31 941		Ohio .....	117 731	120 905
	Connecticut .....	2 011	2 179		Oklahoma .....	24 680	9 717
	Florida .....	5 214	5 640		Pennsylvania .....	46 453	64 525
	Illinois .....	11 899	5 569		South Carolina .....	20 213	20 100
	Louisiana .....	4 116	N		Tennessee .....	48 834	23 883
	Massachusetts .....	10 904	6 002		Texas .....	106 978	94 611
	Michigan .....	16 608	9 351		Virginia .....	44 536	24 808
	Mississippi .....	2 331	4 109		Washington .....	71 800	38 259
	Missouri .....	7 685	3 449		Wisconsin .....	55 867	25 922
	Nebraska .....	14 366	N	2123221	<b>INDUSTRIAL GLASS SAND</b> United States .....	218 913	177 949
	Nevada .....	7 338	N		California .....	22 929	30 590
	New Hampshire .....	2 240	N		Illinois .....	27 945	18 346
	New Jersey .....	4 467	6 890	2123223	<b>INDUSTRIAL MOLDING SAND</b> United States .....	83 099	68 951
	New York .....	13 802	17 727		Illinois .....	23 135	14 160
	Ohio .....	24 759	13 314	2123229	<b>OTHER INDUSTRIAL SAND</b> United States .....	175 288	138 853
	Oklahoma .....	2 257	N		Illinois .....	36 409	31 418
	Pennsylvania .....	4 924	5 712	2123251	<b>BENTONITE</b> United States .....	180 462	142 490
	South Carolina .....	4 349	N		Wyoming .....	140 300	86 582
	Tennessee .....	4 878	N	2123253	<b>FIRE CLAY</b> United States .....	2 806	5 896
	Texas .....	27 078	15 683	2123255	<b>FULLER'S EARTH</b> United States .....	225 660	180 477
	Virginia .....	3 779	N		Georgia .....	56 652	66 168
	Washington .....	17 696	18 850	2123257	<b>FELDSPAR (CRUDE, CRUSHED, OR GROUND)</b> United States .....	37 341	96 746
	Wisconsin .....	9 473	11 626	2123258	<b>COMMON (MISCELLANEOUS) CLAY AND SHALE</b> United States .....	91 958	87 257
2123213	<b>CONSTRUCTION SAND AND GRAVEL (WASHED, SCREENED, OR OTHERWISE TREATED)</b> United States .....	1 962 079	1 650 664	2123259	<b>OTHER CLAY, CERAMIC, AND REFRACTORY MINERALS INCLUDING MAGNESITE AND BRUCITE</b> United States .....	61 370	84 387
	Alabama .....	28 550	26 147	2123911	<b>POTASSIUM SALTS AND BORON COMPOUNDS</b> United States .....	725 032	N
	Arkansas .....	31 778	21 521	2123913	<b>SODIUM CARBONATE AND SULFATE</b> United States .....	964 543	860 467
	California .....	272 317	286 663	2123921	<b>CRUDE PHOSPHATE ROCK (ORE OR MATRIX)</b> United States .....	55 888	15 014
	Connecticut .....	9 162	8 639	2123923	<b>PREPARED PHOSPHATE ROCK</b> United States .....	950 482	1 178 158
	Florida .....	54 397	62 919		Florida .....	740 409	916 907
	Georgia .....	9 858	9 598				
	Illinois .....	77 114	83 650				
	Iowa .....	41 584	30 859				
	Louisiana .....	31 521	32 701				
	Massachusetts .....	18 053	28 269				

Table 2. **Product Class Shipments or Receipts for Services for Selected States and Offshore Areas: 1997 and 1992—Con.**

[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 of the Industry Series reports. 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 explanation of terms, see appendixes]

NAICS product or service class code	Product or service class and geographic area	Value of product shipments or receipts for services		NAICS product or service class code	Product or service class and geographic area	Value of product shipments or receipts for services	
		1997 (\$1,000)	1992 (\$1,000)			1997 (\$1,000)	1992 (\$1,000)
2123931	<b>BARITE</b> United States .....	D	12 969	2123999	<b>OTHER NONMETALLIC MINERALS</b> United States .....	302 103	N
2123933	<b>ROCK SALT</b> United States .....	220 846	198 488		Florida .....	22 143	N
2123935	<b>NATIVE SULFUR</b> United States .....	D	146 980	2131121	<b>OIL AND GAS FIELD EXPLORATION SERVICES</b> United States .....	391 818	N
2123939	<b>OTHER CHEMICAL AND FERTILIZER MINERALS</b> United States .....	D	39 057		Colorado .....	7 865	N
2123991	<b>DIATOMITE, CRUDE AND PREPARED</b> United States .....	128 891	139 317	2131122	<b>OTHER OIL AND GAS FIELD SUPPORT ACTIVITIES</b> United States .....	7 844 945	N
2123993	<b>GYPSUM #</b> United States .....	66 131	N		Alabama .....	38 072	N
	Nevada .....	3 057	N		Alaska .....	373 615	N
2123995	<b>TALC, SOAPSTONE, AND PYROPHYLLITE</b> United States .....	95 630	N		Arkansas .....	28 833	N
					California .....	385 062	N
					Colorado .....	112 872	N
					Florida .....	4 784	N
					Illinois .....	29 410	N
					Indiana .....	8 906	N
					Kansas .....	112 001	N
					Kentucky .....	49 462	N
					Michigan .....	53 767	N
					Missouri .....	11 500	N
					Montana .....	28 613	N
					New Mexico .....	274 713	N
					North Dakota .....	53 251	N
					Ohio .....	40 322	N
					Pennsylvania .....	47 418	N
					Texas .....	2 710 578	N
					Utah .....	62 063	N
					West Virginia .....	50 223	N
					Wyoming .....	214 346	N

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

# Appendix A.

## Explanation of Terms

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### 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.

# Appendix B.

## NAICS Codes, Titles, and Descriptions

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### SECTOR 21 MINING

The Mining sector comprises establishments that extract naturally occurring mineral solids, such as coal and ores; liquid minerals, such as crude 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 flotation), and other preparation customarily performed at the mine site, or as a part of 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 grouped and classified according to the natural resource mined or to be mined. Industries include establishments that develop the mine site, extract the natural resources, and /or those that beneficiate (i.e., prepare) the mineral mined. Beneficiation is the process whereby the extracted material is reduced to particles that can be separated into mineral and waste, the former suitable for further processing or direct use. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. In contrast, manufacturing operations primarily use chemical and electrochemical processes, such as electrolysis and distillation. However some treatments, such as heat treatments, take place in both the beneficiation and the manufacturing (i.e., smelting/refining) stages. The range of preparation activities varies by mineral and the purity of any given ore deposit. While some minerals, such as petroleum and natural gas, require little or no preparation, others are washed and screened, while yet others, such as gold and silver, can be transformed into bullion before leaving the mine site.

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

classified in Sector 21, Mining. An establishment that mines whose primary output is a more finished manufactured product will be classified in Sector 31-33, Manufacturing.

### 211 Oil and Gas Extraction

Industries in the Oil and Gas Extraction subsector operate and/or develop oil and gas field properties. Such activities may include exploration for crude petroleum and natural gas; drilling, completing, and equipping wells; operating separators, emulsion breakers, desilting equipment, and field gathering lines for crude petroleum; and all other activities in the preparation of oil and gas up to the point of shipment from the producing property. This subsector includes the production of crude petroleum, the mining and extraction of oil from oil shale and oil sands, and the production of natural gas and recovery of hydrocarbon liquids.

Establishments in this subsector include those that operate oil and gas wells on their own account or for others on a contract or fee basis. Establishments primarily engaged in providing support services, on a fee or contract basis, required for the drilling or operation of oil and gas wells (except geophysical surveying and mapping) are classified in Subsector 213, Support Activities for Mining.

### 2111 Oil and Gas Extraction

This NAICS Industry Group includes establishments classified in NAICS Industry 21111, Oil and Gas Extraction.

### 21111 Oil and Gas Extraction

This industry comprises establishments primarily engaged in operating and/or developing oil and gas field properties and establishments primarily engaged in recovering liquid hydrocarbons from oil and gas field gases. Such activities may include exploration for crude petroleum and natural gas; drilling, completing, and equipping wells; operation of separators, emulsion breakers, desilting equipment, and field gathering lines for crude petroleum; and all other activities in the preparation of oil and gas up to the point of shipment from the producing property. This industry includes the production of crude petroleum, the mining and extraction of oil from oil shale and oil sands, the production of natural gas and the recovery of hydrocarbon liquids from oil and gas field gases. Establishments in this industry operate oil and gas wells on their own account or for others on a contract or fee basis.

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## **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

## **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.

## **212 Mining (Except Oil and Gas)**

Industries in the Mining (except Oil and Gas) subsector primarily engage in mining, mine site development, and beneficiating (i.e., preparing) metallic minerals and nonmetallic minerals, including coal. The term "mining" is used in the broad sense to include ore extraction, quarrying, and beneficiating (e.g., crushing, screening, washing, sizing, concentrating, and flotation), customarily done at the mine site.

Beneficiation is the process whereby the extracted material is reduced to particles which can be separated into mineral and waste, the former suitable for further processing or direct use. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, centrifugal separation, and so on. In contrast, manufacturing operations primarily use chemical and electrochemical processes, such as electrolysis, distillation, and so on. However some treatments, such as heat treatments, take place in both stages: the beneficiation and the manufacturing (i.e., smelting/ refining) stages. The range of preparation activities varies by

mineral and the purity of any given ore deposit. While some minerals, such as petroleum and natural gas, require little or no preparation, others are washed and screened, while yet others, such as gold and silver, can be transformed into bullion before leaving the mine site.

Establishments in the Mining (except Oil and Gas) subsector include those that have complete responsibility for operating mines and quarries (except oil and gas wells) and those that operate mines and quarries (except oil and gas wells) for others on a contract or fee basis. Establishments primarily engaged in providing support services, on a contract or fee basis, required for the mining and quarrying of minerals are classified in Subsector 213, Support Activities for Mining.

## **2121 Coal Mining**

This NAICS Industry Group includes establishments classified in NAICS Industry 21211, Coal Mining.

### **21211 Coal Mining**

This industry comprises establishments primarily engaged in one or more of the following: (1) mining bituminous coal, anthracite, and lignite by underground mining, auger mining, strip mining, culm bank mining, and other surface mining; (2) developing coal mine sites; and (3) beneficiating (i.e., preparing) coal (e.g., cleaning, washing, screening, and sizing coal).

### **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

### **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



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### **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

### **2122 Metal Ore Mining**

This industry group comprises establishments primarily engaged in developing mine sites or mining metallic minerals, and establishments primarily engaged in ore dressing and beneficiating (i.e., preparing) operations, such as crushing, grinding, washing, drying, sintering, concentrating, calcining, and leaching. Beneficiating may be performed at mills operated in conjunction with the mines served or at mills, such as custom mills, operated separately.

#### **21221 Iron Ore Mining**

This 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.

#### **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

#### **21222 Gold Ore and Silver Ore Mining**

This industry comprises establishments primarily engaged in developing the mine site, mining, and/or beneficiating (i.e., preparing) ores valued chiefly for their gold and or silver content. Establishments primarily engaged in the transformation of the gold and silver into bullion or dore bar in combination with mining activities are included in this industry.

#### **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

#### **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

#### **21223 Copper, Nickel, Lead, and Zinc Mining**

This industry comprises establishments primarily engaged in developing the mine site, mining, and/or beneficiating (i.e., preparing) ores valued chiefly for their copper, nickel, lead, or zinc content. Beneficiating includes the transformation of ores into concentrates.

#### **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

#### **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

1061 Ferroalloy ores, except vanadium (pt)

#### **21229 Other Metal Ore Mining**

This industry comprises establishments primarily engaged in developing the mine site, mining, and/or beneficiating (i.e., preparing) metal ores (except iron and manganiferous ores valued for their iron content, gold ore, silver ore, copper, nickel, lead, and zinc ore).

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### **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

### **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)

### **2123 Nonmetallic Mineral Mining and Quarrying**

This industry group comprises establishments primarily engaged in developing mine sites, or in mining or quarrying nonmetallic minerals (except fuels). Also included are certain well and brine operations, and preparation plants primarily engaged in beneficiating (e.g., crushing, grinding, washing, and concentrating) nonmetallic minerals.

Beneficiation is the process whereby the extracted material is reduced to particles which can be separated into mineral and waste, the former suitable for further processing or direct use. The operations that take place in beneficiation are primarily mechanical, such as grinding, washing, magnetic separation, and centrifugal separation. In contrast, manufacturing operations primarily use chemical and electrochemical processes, such as electrolysis and distillation. However some treatments, such as heat treatments, take place in both the beneficiation and the manufacturing (i.e., smelting/refining) stages. The range of preparation activities varies by mineral and the purity of any given ore deposit. While some minerals, such as petroleum and natural gas, require little or no preparation, others are washed and screened, while yet others, such as gold and silver, can be transformed into bullion before leaving the mine site.

### **21231 Stone Mining and Quarrying**

This industry comprises (1) establishments primarily engaged in developing the mine site, mining or quarrying dimension stone (i.e., rough blocks and/or slabs of stone), or mining and quarrying crushed and broken stone and/or (2) preparation plants primarily engaged in beneficiating stone (e.g., crushing, grinding, washing, screening, pulverizing, and sizing).

### **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

### **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

### **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

### **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)

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### **21232 Sand, Gravel, Clay, and Ceramic and Refractory Minerals Mining and Quarrying**

This industry comprises (1) establishments primarily engaged in developing the mine site and/or mining, quarrying, dredging for sand and gravel, or mining clay, (e.g., china clay, paper clay and slip clay) and (2) preparation plants primarily engaged in beneficiating (e.g., washing, screening, and grinding) sand and gravel, clay, and ceramic and refractory minerals.

#### **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

#### **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

#### **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.

#### **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.

#### **21239 Other Nonmetallic Mineral Mining and Quarrying**

This industry comprises establishments primarily engaged in developing the mine site, mining, and/or milling or otherwise beneficiating (i.e., preparing) nonmetallic minerals (except coal, stone, sand, gravel, clay, ceramic, and refractory minerals).

#### **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. Drylake 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

#### **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

#### **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.

### **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.

### **213 Support Activities for Mining**

Industries in the Support Activities for Mining subsector group establishments primarily providing support services, on a fee or contract basis, required for the mining and quarrying of minerals and for the extraction of oil and gas. Establishments performing exploration (except geophysical surveying and mapping) for minerals, on a contract or fee basis, are included in this subsector. Exploration includes traditional prospecting methods, such as taking core samples and making geological observations at prospective sites.

The activities performed on a fee or contract basis by establishments in the Support Activities for Mining subsector are also often performed in-house by mining operators. These activities include: taking core samples, making geological observations at prospective sites, and such oil and gas operations as spudding in, drilling in, re-drilling, directional drilling, 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.

### **2131 Support Activities for Mining**

This NAICS Industry Group includes establishments classified in NAICS Industry 21311, Support Activities for Mining.

### **21311 Support Activities for Mining**

This industry comprises establishments primarily engaged in providing support services, on a fee or contract basis, required for the mining and quarrying of minerals and for the extraction of oil and gas. Drilling, taking core samples, and making geological observations at prospective sites (except geophysical surveying and mapping) for minerals, on a fee or contract basis, is included in this industry.

#### **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

#### **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.

#### **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

#### **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.

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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)

**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

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### 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. Most forms were 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 supplies and fuels was not collected on the short form; thus, its use would increase the value of the industry 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

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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

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Not applicable for this report.

# Appendix E. Metropolitan Areas

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Not applicable for this report.

# Appendix F.

## Footnotes for Products or Services Statistics

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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).
# 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).
# 212111.....	Value of net shipments for 1997 is 9,307,909 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 received 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.
# 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 received 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.
# 212113.....	Quantity and value of net shipments in 1997 are 2,464.5 thousand short tons and 119.9 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.
# 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.
# 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).

NAICS product or service code	Footnote
# 212222WYWT . . . .	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).
# 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).
# 2122341111 . . . . .	Includes material for leaching.
# 212234WYWT . . . .	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).
# 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).
# 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).
# 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).
# 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).
# 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).
# 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).
# 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).
# 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).
# 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).

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 detailed data and estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).
# 2123933100 .....	Includes some rock salt shipped as brine.
# 2123939100 .....	Represents pyrites and other miscellaneous chemical and fertilizer minerals such 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).
# 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).
# 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).
# 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).
# 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).
# 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).
# 2131150Y .....	Includes contract services performed by mine operators classified in nonmetallic minerals (except fuels) mining industries.

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NAICS product or service code	Footnote
# 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).

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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	2123999YVV .....	1499AXX .....	1499900	212399WYWT pt ...	1499000 pt.....	1499700
2123999151 .....	1499A50 .....	1499500				212399WYWT pt ...	1499000 pt.....	1499800



