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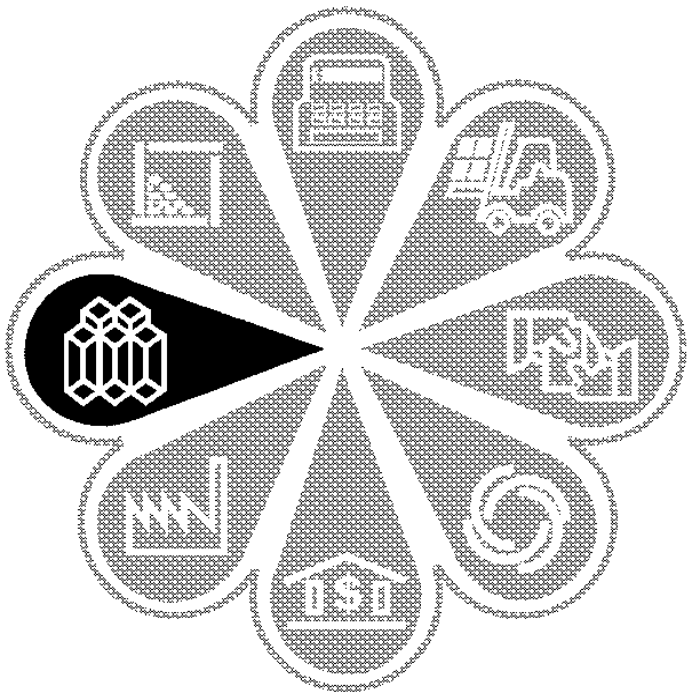
1992
Census of Mineral Industries

MIC92-I-10A

INDUSTRY SERIES

Iron Ores

Industry 1011



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

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U.S. Department of Commerce
Ronald H. Brown, Secretary
David J. Barram, Deputy Secretary

Economics and Statistics Administration
Everett M. Ehrlich, Under Secretary
for Economic Affairs

BUREAU OF THE CENSUS
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If you have any questions concerning the statistics in this report, call 301-457-4680.

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Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public.

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

Policymaking agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.

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 and 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.

AUTHORITY AND SCOPE

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 1992 Economic Census consists of the following eight censuses:

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Financial, Insurance, and Real Estate Industries
- Census of Transportation, Communications, and Utilities
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction Industries

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1992 Census of Agriculture and 1992 Census of Governments are conducted separately.) The next economic census is scheduled to be taken in 1998 covering the year 1997.

AVAILABILITY OF THE DATA

The results of the economic census are available in printed reports for sale by the U.S. Government Printing Office and on compact discs for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Bureau of the Census, Washington, DC 20233-8300. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State data centers in every State as well as business and industry data centers in many States also supply economic census statistics.

WHAT'S NEW IN 1992

The 1992 Economic Census covers more of the economy than any previous census. New for 1992 are data on communications, utilities, financial, insurance, and real estate, as well as coverage of more transportation industries. The economic, agriculture, and governments censuses now collectively cover nearly 98 percent of all economic activity.

Among other changes, new 1992 definitions affect the boundaries of about a third of all metropolitan areas. Also, the Survey of Women-Owned Businesses has now been expanded to include all corporations.

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1963, 1958, and 1954. Prior to that time, the individual subcomponents 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 1840 and subsequent censuses to include mining and some commercial activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 Manufactures Census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade and construction industries, but it was broadened in 1933 to include some of the service trades.

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 Enterprise Statistics Program, which publishes combined data from the economic census, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The census of construction industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The census of transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks, but expanded in 1987 to cover business establishments in several transportation industries. For 1992, these statistics are incorporated into a broadened census of transportation, communications, and utilities. Also new for 1992 is the census of financial, insurance, and real estate industries. This is part of a gradual expansion in coverage of industries previously subjected to government regulation.

The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic census in 1972 along with the Survey of Women-Owned Businesses.

An economic census has also been taken in Puerto Rico since 1909, in the Virgin Islands of the United States and Guam since 1958, and in the Commonwealth of the Northern Mariana Islands since 1982.

Statistical reports from the 1987 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 data published since 1967 are still available for sale on microfiche from the Census Bureau.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

While the census provides complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, with the results appearing in publication series such as Current Business Reports (retail and wholesale trade and service industries), the Annual Survey of Manufactures, Current Industrial Reports, and the Quarterly Financial Report. Most of these surveys, while providing more frequent observations, yield less kind-of-business and geographic detail than the census. The County Business Patterns program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

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 1992 Economic Census and Related Statistics*. More information on the methodology, procedures, and history of the census will be published in the *History of the 1992 Economic Census*. Contact Customer Services for information on availability.

Census of Mineral Industries

GENERAL

This report, from the 1992 Census of Mineral Industries, is one of a series of 12 industry reports; each provides statistics for individual industries or groups of related industries. Additional separate reports will be issued for each geographic division showing statistics by State and for special subjects, such as fuels and electric energy consumed.

The introduction to the *General Summary* report discusses, at greater length, many of the subjects described in this introduction. For example, the *General Summary* text discusses the economic significance of the mining sector, the relation of value added by mining to value added by manufacture, some of the changes in statistical concepts over the history of the census, and the valuation problems arising from intracompany transfers between mining establishments, manufacturing plants, and sales offices and sales branches of a company.

SCOPE OF CENSUS AND DEFINITION OF MINERAL INDUSTRIES

The 1992 Census of Mineral Industries covers all establishments with one paid employee or more primarily engaged in mining as defined in the *1987 Standard Industrial Classification (SIC) Manual*[1]. This is the system of industrial classification developed by experts on classification in Government and private industry under the guidance of the Office of Information and Regulatory Affairs, Office of Management and Budget. This classification system is used by Government agencies as well as many organizations outside the Government.

The SIC Manual defines mining in the broad sense to include the extraction of minerals occurring naturally: solids such as coal and ores, liquids such as crude petroleum, and gases such as natural gas. The term ''mining'' is used in the broad sense to include quarrying, well operation, milling (crushing, screening, washing, flotation, etc.), and other preparations needed to make minerals marketable. Exploration is included as is the development of mineral properties. Services performed on a contract, fee, or other basis in the exploration and development of mineral properties are classified separately but within this division.

Mining operations are classified by industry on the basis of the principal mineral produced or, if there is no production, on the basis of the principal mineral for which exploration or development work is in progress. The recovery of material from culm banks, ore dumps, and other waste mineral piles is classified in the appropriate mining industry according to the mineral product recovered.

The crushing, grinding, or other treatment of certain earths, rocks, and other nonmetallic minerals not in conjunction with mining activities is not included in this division but is classified as manufacturing. Hauling and other transportation beyond the mine property and contract hauling (except out of open pits in conjunction with mining) also are excluded.

Mining operations carried on as secondary activities at manufacturing establishments (such as clay pits at clay products plants or sand and gravel operations at ready-mixed concrete plants) are not within the scope of this census. However, selected data (production workers' wages and hours; total cost of supplies, fuels, electric energy, and contract work; and quantity of production for mined products) on such mining activities have been obtained in the 1992 Census of Manufactures and are included in the mining reports. They are clearly specified wherever included.

ESTABLISHMENT BASIS OF REPORTING

The census of mineral industries covers each mining establishment of firms with one paid employee or more operating in the United States. A company operating more than one establishment is required to file a separate report for each location. A mineral establishment is defined as a single physical location where mineral operations are conducted.

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

[1] *Standard Industrial Classification Manual: 1987.* For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

reports were then allocated to State establishments based on the data reported at the State level. The 1992 figures for establishments include the summation of operations for each State allocated from these nationwide reports.

USE OF ADMINISTRATIVE RECORDS

From a mailout universe of about 28,500 mining establishments, approximately 11,000 small single-establishment companies were not mailed a questionnaire. For these establishments, some employment, payroll, and receipts data were obtained from the administrative records of other agencies. Selection of the small establishment nonmail cases was done on an industry-by-industry basis, and a variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. This information was then used in conjunction with industry averages and other information to estimate the statistics for administrative-record and nonresponse establishments. The first column in tables 2 and 4 provides an indication of the extent that these establishments account for the figures shown. The value of shipments and receipts and cost of supplies were generally not distributed among specific products and supplies for these establishments, but were included in the product and supply ''not specified by kind'' categories. Overall, establishments for which administrative-record data were used accounted for less than 2 percent of total value of shipments and receipts.

The industry classification codes included in the administrative-record files were used for those establishments excused from filing census forms. Generally, these codes were assigned on the basis of brief descriptions of the general activity of the establishment. Where the description was incomplete, or where there were relatively fine lines of demarcation among industries or between mining and nonmining activities, the code assigned to an establishment could differ from that which would have been assigned on the basis of more complete product or activity information. Therefore, the total establishment count should be viewed as an approximate measure. The counts for establishments with 20 employees or more are far more reliable.

In the 1992 census, as in the 1987, 1982, 1977, and 1972 censuses, data for single-unit firms without paid employees were excluded. This exclusion had only a slight effect on industry aggregates for most industries. Data for firms without employees were included in the 1963, 1958, and 1954 censuses if they reported more than $500 in (1) value of shipments and receipts, (2) cost of supplies and purchased machinery, or (3) capital expenditures.

AUXILIARIES

Statistics for employment and payroll for individual industries and industry groups also include employment and payroll figures for administrative offices, warehouses, storage facilities, and other auxiliary establishments servicing mining establishments. As in previous censuses, respondents were asked to file separate reports (form ES-9200) for any separately operated auxiliary establishments. Classification of employment and payroll data at such auxiliary establishments was based on the mining establishments served.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each of the establishments covered in the census was classified in 1 of 31 mineral industries in accordance with the industry definitions in the 1987 SIC Manual. An industry is generally defined as a group of establishments producing the same product or closely related group of products. 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. Application of these criteria led to the formulation of 31 mining industries, each assigned a four-digit code. The classification system also provides broader groups of industries, with 20 three-digit groups and 4 two-digit groups. Within industries, the system provides for seven-digit products and five-digit product classes. Products are considered primary to an industry if the first four digits of the product codes are the same as the industry code. Products whose first four code numbers differ from the industry code are called secondary products. To determine the industry classification of an establishment, the seven-digit products are grouped together according to the first four digits of the product code. The first four digits of the group of products with the largest value of production become the industry code for the establishment. (For mineral service industries, the classification is on the basis of receipts for services performed.)

In most industries, establishments making products falling into the same industry category use a variety of processes. Separate statistics are provided on the various types of operation. Whenever possible, separate figures are shown for establishments with mines only, mines with preparation plants, and preparation plants only. Separate figures are provided by type of mine (underground, open pit, and combination). Separate statistics also are provided on producing and nonproducing operations, an establishment being defined as nonproducing if no mineral products were shipped during the year.

Statistics usually are provided on the production of minerals mined and used in the same establishment for producing prepared minerals or used at the producing establishment for fuel.

Differences in the integration of production processes and types of operation should be considered when relating the general items (employment, payrolls, value added, etc.) to the product and material data.

VALUE OF SHIPMENTS FOR THE INDUSTRY COMPARED WITH VALUE OF PRODUCT SHIPMENTS

This report shows value of shipments and receipt data for industries and products. In tables 1 through 4, these data represent the total value of shipments and receipts 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 table 6 represents the total value of all products shipped that are classified as primary to an industry and includes those that were shipped by all mining establishments regardless of their industry classification. Value of product shipments also may include some products shipped from mining operations associated with manufacturing establishments.

CENSUS DISCLOSURE RULES

In accordance with Federal law governing census reports, no data are published that would disclose the data for an individual establishment or company. However, the number of establishments classified in a specific industry is not considered a disclosure; this information may be released even though other information is withheld.

The disclosure analysis for the industry statistics in tables 1 through 4 of this report 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 total capital expenditures and cost of supplies statistics are suppressed. However, the suppressed data are included in higher level totals.

SPECIAL TABULATIONS

Special tabulations of data collected in the 1992 Census of Mineral Industries may be requested. The data will be in summary form and 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) as are 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, Manufacturing and Construction Division, Bureau of the Census, Washington, DC 20233-6901.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

–	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards.
(X)	Not applicable.
(Z)	Less than half the unit shown.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, and bbl, are used in the customary sense.

CONTACTS FOR DATA USERS

Subject Area	Contact	Phone
Mineral industries–5-year industry and product statistics	Construction and Mineral Census Branch Manufacturing and Construction Division Bureau of the Census	301-457-4680
Mineral Industries–Annual product statistics (domestic and international), except fuels	Bureau of Mines Department of the Interior	202-501-9649
Mineral Industries–Coal and oil and gas production	National Energy Information Center (NEIC) Department of Energy	202-586-8800
To order any Census Bureau publication	Customer Services (DUSD) Bureau of the Census	301-457-4100
Import/ Export statistics	Foreign Trade Division Bureau of the Census	301-457-3041

Users' Guide for Locating Statistics in This Report by Table Number

[For explanation of terms, see appendixes]

Item	Industry and historical	Industry by State	Summary statistics	Industry by type of operation[1]	Industry by employment size	Industry-product analysis	Detailed product shipments	Product class by State	Detailed supplies by industry
Number of operating companies	1								
Establishments:									
Total number	1	2	3a	3b	4				
Employment and payroll:									
Number of employees	1	2	3a	3b	4				
Payroll	1	2	3a	3b	4				
Production, development, and exploration—									
Workers	1	2	[2]3a	3b	4				
Hours	1	2	3a	3b	4				
Wages	1	2	3a	3b	4				
Supplemental labor costs			[2]3a						
Value added, cost of supplies, shipments, and inventories:									
Value added by mining	1	2	3a	3b	4				
Cost of supplies	1	2	[2]3a	3b	4				[2]7a
Resales, cost and value			3a						
Purchased fuels consumed			3a						[2]7b
Purchased electricity			[2]3a						
Cost of contract work			3a						
Industry shipments and receipts	1	2	3a	3b	4	[2]5			
Value of net shipments						[2]5			
Product shipments							6a	6b	
Inventories			3a						
Gross book value of depreciable or depletable assets, beginning and end of year; depreciation and depletion charges for year:									
Buildings and structures, except land[3]			3a						
Machinery and equipment[3]			3a						
Mineral exploration and development[3 4]			3a						
Mineral land and rights[3 4]			3a						
New and used capital expenditures, excluding land and rights:									
Total	1	2	3a	3b	4				
Buildings and structures			3a						
Machinery and equipment			3a						
Mineral exploration and development[4]			3a						
Capitalized mineral land and rights[3 4]			3a						
Rental payments			[2]3a						
Expensed mineral exploration, development, land, and rights[4]			[2]3a						

[1]Not published in MIC92-I-13C.

[2]Detailed information shown.

[3]Not published in MIC92-I-13A.

[4]Not published in MIC92-I-13B and MIC92-I-13C.

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Iron Ores

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Publication Program ..... Inside back cover

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Description of Industries and Summary of Findings

This report shows 1992 Census of Mineral Industries statistics for establishments classified in the following industry

SIC code and title	
1011	Iron Ores

The industry statistics (employment, payroll, value of shipments, cost of supplies, etc.) are reported for each establishment as a whole. Aggregates of such data for an industry reflect not only the primary activities of the establishments but also all secondary activities performed by the same establishments. This fact should be taken into account in comparing industry statistics (tables 1 through 4 and 7) with product statistics (table 6) showing shipments by all industries of the primary products of the specified industry. The extent of the ''product mix'' is indicated in table 5, which shows the value of primary and secondary products shipped by establishments classified in the specified industry and the value of net shipments of primary products of the industry produced as secondary products by establishments classified in other industries.

Single-establishment companies with up to 20 employees (cutoff varied by industry) were excluded from the mail portion of the census. For these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated), data on payrolls and receipts were obtained from administrative records of other Federal agencies. This information was used in conjunction with industry averages and other information to develop estimates for all statistics. The first column in tables 2 and 4 provides an indication of the extent that these establishments account for the figures shown.

Establishment data were tabulated based on industry definitions included in the *1987 Standard Industrial Classification (SIC) Manual*[1]. Comparability for the product classes and product codes that changed between the 1992 and 1987 censuses is shown in appendix B. This appendix presents, in tabular form, the linkage from 1992 to 1987, and 1987 to 1992.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

The Bureau of the Census statistics on products for this industry are not entirely comparable with product statistics for the same industry published by the Bureau of Mines or the Energy Information Administration. The differences that occur result primarily from differences in data collection methods, coverage, and objectives sought.

INDUSTRY 1011, IRON ORES

This industry is made up of establishments primarily engaged in the mining, beneficiating, or otherwise preparing iron ores. This industry includes production of sinter and other agglomerates, except those associated with blast furnace operations.

In the 1992 Census of Mineral Industries, Industry 1011, Iron Ores, had employment of 8.7 thousand. The employment figure was 23 percent above the 7.1 thousand reported in 1987. The total value of shipments and receipts for the industry was $1.7 billion in 1992. The value added by mining was $985.4 million in 1992. Value added per employee was $113.3 thousand in 1992; it was $108.2 thousand in 1987.

The total cost of supplies used by establishments classified in this industry amounted to $782.3 million, while the cost of selected supplies, minerals received for preparation, and purchased machinery installed amounted to $401.8 million and is shown in table 7a. The total cost of fuels used in this industry amounted to $86.6 million in 1992. Data on specific fuels used appear in table 7b.

Single-establishment companies in this industry with up to 18 employees were excluded from the mail portion of the census. The data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were imputed as described above. These establishments accounted for less than 1 percent of the total value of shipments and receipts.

[1] *Standard Industrial Classification Manual: 1987.* For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

Table 1. **Historical Industry Statistics: 1992 and Earlier Census Years**

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

Year	Companies (number)	Establishments during year: Total (number)	Establishments during year: With 20 employees or more (number)	All employees: Number (1,000)	All employees: Payroll (million dollars)	Production, development, and exploration workers: Number (1,000)	Production, development, and exploration workers: Hours (millions)	Production, development, and exploration workers: Wages (million dollars)	Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expenditures (million dollars)
	INDUSTRY 1011, IRON ORES											
1992 Census	26	40	18	8.7	348.2	7.2	14.9	274.2	985.4	782.3	1 714.8	53.0
1987 Census	39	51	16	7.1	224.2	5.6	11.2	165.8	767.9	618.5	1 362.4	24.0
1982 Census	50	78	40	11.7	339.8	7.0	12.6	201.2	770.3	706.7	1 414.3	62.7
1977 Census	70	97	61	19.3	372.3	13.9	28.5	253.3	1 046.4	1 026.6	1 614.4	458.5
1972 Census	(NA)	111	56	19.7	218.2	15.3	30.2	155.6	701.5	423.7	1 065.0	60.1

Table 2. **Industry Statistics for Selected States: 1992 and 1987**

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

Industry and geographic area	1992: E[1]	1992: Establishments during year: Total (number)	1992: Establishments during year: With 20 employees or more (number)	1992: All employees: Number[2] (1,000)	1992: All employees: Payroll (million dollars)	1992: Production, development, and exploration workers: Number (1,000)	1992: Production, development, and exploration workers: Hours (millions)	1992: Production, development, and exploration workers: Wages (million dollars)	1992: Value added by mining (million dollars)	1992: Cost of supplies used, purchased machinery installed, etc. (million dollars)	1992: Value of shipments and receipts (million dollars)	1992: Capital expenditures (million dollars)	1987: All employees[2] (1,000)	1987: Value added by mining (million dollars)
INDUSTRY 1011, IRON ORES														
United States	**–**	**40**	**18**	**8.7**	**348.2**	**7.2**	**14.9**	**274.2**	**985.4**	**782.3**	**1 714.8**	**53.0**	**7.1**	**767.9**
Michigan	–	8	5	G	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	G	(D)
Minnesota	–	13	8	I	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	H	(D)
Ohio	–	3	3	E	(D)	–	–	–	–	–	–	–	E	–

[1]Some payroll and sales data for small single-unit companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of the figures shown: E1–10 to 19 percent; E2–20 to 29 percent; E3–30 to 39 percent; E4–40 to 49 percent; E5–50 to 59 percent; E6–60 to 69 percent; E7–70 to 79 percent; E8–80 to 89 percent; E9–90 percent or more.

[2]States with 100 employees or more are shown. Some statistics are withheld to avoid disclosing data for individual companies. If employment is 100 or more, number of establishments is shown and employment-size range is indicated by one of the following symbols: 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.

Table 3a. **Summary Statistics by Industry: 1992**

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

Item	Iron ores (SIC 1011)	Item	Iron ores (SIC 1011)
Establishments during year, number	40	Cost of supplies, mil dol	782.3
With 0 to 19 employees, number	22	Supplies used, minerals received, and purchased machinery installed, mil dol	401.8
With 20 to 99 employees, number	7	Resales, mil dol	(D)
With 100 employees or more, number	11	Purchased fuels consumed, mil dol	86.6
All employees:		Purchased electric energy:	
Average for year, 1,000	8.7	Quantity, mil kWh	7 287.5
Payroll for year, mil dol	348.2	Cost, mil dol	267.9
		Electric energy generated less sold, mil kWh	–
		Contract work, mil dol	(D)
Production, development, and exploration workers:			
Average for year, 1,000	7.2	Cost of purchased communication services, mil dol	1.3
March, 1,000	7.4		
May, 1,000	7.4	Value of shipments and receipts, mil dol	1 714.8
August, 1,000	6.5	Value of resales, mil dol	(D)
November, 1,000	7.4		
		Inventories, end of 1991, mil dol	225.1
		Mined or quarried products, mil dol	110.2
		Supplies, parts, fuels, etc., mil dol	114.9
Hours, millions	14.9		
Wages, mil dol	274.2	Inventories, end of 1992, mil dol	221.2
		Mined or quarried products, mil dol	111.6
		Supplies, parts, fuels, etc., mil dol	109.6
Supplemental labor costs not included in payroll, mil dol	103.4		
Legally required expenditures, including Social Security contributions, mil dol	43.4	Gross book value of depreciable assets (usually original cost) at beginning of year, mil dol	3 812.6
Payments for voluntary programs, mil dol	60.0	Buildings and other structures, except land, mil dol	1 425.8
		Machinery and equipment, mil dol	2 327.3
		Mineral exploration and development, mil dol	46.9
Value added by mining, mil dol	985.4	Mineral land and rights, mil dol	12.6

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Table 3a. **Summary Statistics by Industry: 1992**—Con.

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

Item	Iron ores (SIC 1011)	Item	Iron ores (SIC 1011)
Capital expenditures during year (except land and mineral rights)—mil dol	53.0	Gross book value of depreciable assets at end of year—mil dol	3 848.9
New capital expenditures during year—mil dol	(D)	Buildings and other structures, except land—mil dol	1 441.4
Buildings and other structures, except land—mil dol	(D)	Machinery and equipment—mil dol	2 346.4
Machinery and equipment—mil dol	(D)	Mineral exploration and development—mil dol	48.4
		Mineral land and rights—mil dol	12.6
Used capital expenditures during year—mil dol	(D)	Depreciation and depletion charges for year—mil dol	113.0
Buildings and other structures, except land—mil dol	.1	Buildings and other structures, except land—mil dol	38.9
Machinery and equipment—mil dol	(D)	Machinery and equipment—mil dol	71.3
		Mineral exploration and development—mil dol	2.2
		Mineral land and rights—mil dol	.7
Mineral exploration and development—mil dol	(D)	Rental payments during year—mil dol	14.2
		Buildings and other structures, except land—mil dol	.1
Capitalized mineral land and rights—mil dol	.2	Machinery and equipment—mil dol	14.1
		Lease rents—mil dol	(D)
Deductions from depreciable assets during year—mil dol	16.9		
Buildings and other structures, except land—mil dol	(D)	Expensed mineral exploration, development, land, and rights—mil dol	37.2
Machinery and equipment—mil dol	11.1	Mineral exploration and development—mil dol	(D)
Mineral exploration and development—mil dol	(D)	Mineral land and rights—mil dol	(D)
Mineral land and rights—mil dol	.1		

Table 3b. **Industry Statistics by Industry and Type of Operation: 1992 and 1987**

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

Industry and type of operation	1992											1987	
	Establishments during year		All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expenditures (million dollars)	All employees (1,000)	Value added by mining (million dollars)
	Total (number)	With 20 employees or more (number)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						
INDUSTRY 1011, IRON ORES													
All establishments	**40**	**18**	**8.7**	**348.2**	**7.2**	**14.9**	**274.2**	**985.4**	**782.3**	**1 714.8**	**53.0**	**7.1**	**767.9**
Producing establishments	39	18	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Mines only	13	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Open-pit	13	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Mines with preparation plants	10	9	7.8	305.1	6.8	14.2	259.2	938.9	729.5	1 618.3	50.1	6.5	756.7
Underground	1	1	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Open-pit	9	8	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Separately operated preparation plants	7	2	.3	13.5	.3	.5	11.5	25.2	46.2	70.4	.9	(D)	(D)
Undistributed[1]	9	6	(D)	(D)	–	–	–	–	–	–	–	(D)	–
Nonproducing establishments	1	–	(D)	(D)	(D)	(D)	(D)	(D)	(D)	–	(D)	(D)	(D)

[1]Includes data for separately operated auxiliary establishments in addition to establishments that were not possible to classify based on the information available.

Table 4. **Industry Statistics by Employment Size of Establishment: 1992**

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

Industry and employment size class	E[1]	Establishments during year (number)	All employees		Production, development, and exploration workers			Value added by mining (million dollars)	Cost of supplies used, purchased machinery installed, etc. (million dollars)	Value of shipments and receipts (million dollars)	Capital expenditures (million dollars)
			Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)				
INDUSTRY 1011, IRON ORES											
Total	**–**	**40**	**8.7**	**348.2**	**7.2**	**14.9**	**274.2**	**985.4**	**782.3**	**1 714.8**	**53.0**
Establishments with an average of—											
0 to 4 employees	E7	11	(Z)	.7	(Z)	(Z)	.4	1.6	1.1	2.6	.1
5 to 9 employees	E1	4	(Z)	.9	(Z)	(Z)	.7	2.7	3.2	5.7	.2
10 to 19 employees	–	7	1.3	58.7	.7	1.4	28.5	73.8	9.8	161.1	1.9
20 to 49 employees	–	5	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
50 to 99 employees	–	2	(D)	(D)	(D)	(D)	(D)	(D)	80.6	(D)	1.1
100 to 249 employees	–	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
250 to 499 employees	–	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
500 to 999 employees	–	4	7.4	287.9	6.4	13.5	244.6	907.3	687.7	1 545.4	49.6
1,000 to 2,499 employees	–	3	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Covered by administrative records[2]	E9	10	(Z)	1.0	(Z)	.1	.8	2.1	1.3	3.3	.2

See footnotes at end of table.

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Table 4. **Industry Statistics by Employment Size of Establishment: 1992**—Con.

Note: Data shown as a (D) are included in underscored figures above.

[1]Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data based on administrative-record data account for 10 percent or more of figures shown: E1—10 to 19 percent; E2—20 to 29 percent; E3—30 to 39 percent; E4—40 to 49 percent; E5—50 to 59 percent; E6—60 to 69 percent; E7—70 to 79 percent; E8—80 to 89 percent; E9—90 percent or more.

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

Table 5. **Industry–Product Analysis—Summary of Industry Shipments and Receipts and Net Shipments of Primary Products: 1992 and 1987**

[Million dollars. An establishment is assigned to an industry based on shipment values of products representing largest amount considered primary to an industry. Frequently, establishment shipments comprise mixtures of products assigned to an industry (primary), those considered primary to other industries (secondary), and receipts for activities such as resales or contract work. Columns A–E show this product pattern for an industry. Extent to which an industry's primary products are shipped by establishments classified in and out of an industry is shown in columns F–H. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

SIC code	Industry and year	Value of shipments and receipts					Value of net shipments of primary products or services		
		Total	Primary products	Secondary products	Receipts for services	Products purchased and resold without further processing	Total produced in all industries	Produced in this industry	Produced in other industries
		A	B	C	D	E	F	G	H
1011	Iron ores 1992	1 714.8	(D)	–	–	(D)	[1]1 691.0	(D)	(D)
	1987	1 362.4	(D)	(D)	–	(Z)	[1]1 360.5	(D)	(D)

[1]Represents sum of direct-shipping ores, iron ore concentrates for consumption, and iron agglomerates.

Table 6a. **Products or Services: 1992 and 1987**

[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]

Product code	Product	1992			1987		
		Quantity of production for all purposes	Product shipments		Quantity of production for all purposes	Product shipments	
			Quantity	Value (million dollars)		Quantity	Value (million dollars)
1011– —	**IRON ORES**						
	Total	**(X)**	**(X)**	**[1]1 715.2**	**(X)**	**(X)**	**[1]1 362.3**
10111	Crude iron ore	(X)	(X)	(D)	(X)	(X)	9.9
10111 21	Direct-shipping ore[2] mil metric tons	.7	.6	4.7	.8	.9	9.9
10111 23	Ore for treatment, concentration, etc. mil metric tons	183.2	(D)	(D)	146.1	–	–
10112	Iron ore concentrates and agglomerates	(X)	(X)	1 686.4	(X)	(X)	1 350.5
	Iron ore concentrates, including washed material:						
10112 03	For consumption mil metric tons	.6	.6	28.5	.6	.6	25.2
10112 05	For agglomeration plants not at blast furnaces mil metric tons	56.9	–	–	47.7	–	–
10112 07	Iron agglomerates: pellets, sinter, briquets, and other mil metric tons	54.6	55.8	1 657.9	46.4	46.4	1 325.4
10110	Iron ores, n.s.k.	(X)	(X)	(D)	(X)	(X)	1.9
10110 00	Iron ores, n.s.k.[3]	(X)	(X)	(D)	(X)	(X)	1.9

[1]Net shipments represented by the sum of direct-shipping ore, iron ore concentrates for consumption, and iron agglomerates were 57.0 million metric tons and 1,691.0 million dollars for 1992. Quantity and value of net shipments for 1987 were 47.9 million metric tons and 1,360.5 million dollars.

[2]Includes estimates for small companies (estimates were made from administrative-record data rather than collected from respondents).

[3]Represents value for establishments that did not report detailed data.

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Table 6b. Product Classes—Value of Shipments by All Producers for Specified States: 1992 and 1987

[Million dollars. Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in table 2. Also, product classes are not shown if they are miscellaneous or "not specified by type" classes. Statistics for some States are withheld because they are either less than $1 million in product class shipments or they disclose data for individual companies in 1992. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Product class and geographic area	1992 value of product shipments	1987 value of product shipments	Product class and geographic area	1992 value of product shipments	1987 value of product shipments
10111, CRUDE IRON ORE			**10112, IRON ORE CONCENTRATES AND AGGLOMERATES**		
United States	**(D)**	**9.9**	**United States**	**1 686.4**	**1 350.5**

Table 7a. Selected Supplies, Minerals Received for Preparation, and Purchased Machinery Installed: 1992 and 1987

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

Supply code	Industry and supply consumed		1992		1987	
			Quantity	Delivered cost (million dollars)	Quantity	Delivered cost (million dollars)
	INDUSTRY 1011, IRON ORES					
	Selected supplies used, minerals received for preparation, and purchased machinery installed		**(X)**	**401.8**	**(X)**	**260.8**
	Minerals or ores for preparation:					
101112	Crude iron ore received for concentration	mil metric tons	(D)	(D)	(D)	(D)
101113	Crude iron ore produced and concentrated at same establishment	mil metric tons	179.2	(X)	145.9	(X)
101123	Iron ore concentrates received for agglomeration	mil metric tons	–	–	–	–
101124	Iron ore concentrates produced and agglomerated at same establishment	mil metric tons	55.4	(X)	48.4	(X)
353020	Purchased machinery installed, including mobile loading, transportation, and other equipment installed at the operation		(X)	33.1	(X)	15.8
353030	Parts and attachments for mining, mineral preparation, construction, and conveying machinery and equipment		(X)	76.4	(X)	48.0
	Supplies used:					
145000	Bentonite and other clay nonmetallic minerals		(X)	20.9	(X)	16.1
280110	Industrial chemicals (chemical reagents, calcium chloride, etc.) except explosive materials and blasting accessories		(X)	17.5	(X)	(D)
289218	Explosive materials (except ammonium nitrate) and blasting accessories		(X)	15.0	(X)	10.6
289212	Ammonium nitrate		(X)	6.3	(X)	4.3
290000	Lubricating oils and greases, including hydraulic oils		(X)	(D)	(X)	4.6
301100	Tires and inner tubes		(X)	8.5	(X)	5.9
332002	Iron and steel castings		(X)	65.8	(X)	50.2
346211	Iron and steel forgings					
331066	Steel shapes and forms, except castings and forgings		(X)	27.5	(X)	(D)
970098	All other supplies		(X)	93.7	(X)	68.8
973000	Undistributed - minerals, purchased machinery, parts, attachments, and supplies used[1]		(X)	1.9	(X)	3.1

[1]Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

Table 7b. Fuels Consumed by Type: 1992 and 1987

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

Fuel code	Industry and fuel consumed		1992		1987	
			Quantity	Delivered cost (million dollars)	Quantity	Delivered cost (million dollars)
	INDUSTRY 1011, IRON ORES					
	Fuels used		**(X)**	**86.6**	**(X)**	**65.6**
120005	Coal - bituminous, subbituminous, lignite, and anthracite	1,000 s tons	(D)	(D)	(D)	(D)
	Fuel oil:					
291141	Distillate (light) grade numbers 1, 2, 4, and light diesel fuel	1,000 bbl	669.6	17.8	542.7	13.5
291151	Residual (heavy) grade numbers 5 and 6 and heavy diesel fuel	1,000 bbl	(D)	(D)	(D)	(D)
131159	Gas; natural, manufactured, and mixed	bil cu ft	29.7	59.8	21.0	44.7
291111	Gasoline	mil gal	1.1	1.0	1.0	.8
960018	Other fuels - liquefied petroleum gas, coke, wood, etc.		(X)	4.5	(X)	2.4
974000	Undistributed fuels[1]		(X)	(D)	(X)	.5

[1]Represents cost for establishments that did not report detailed data, including establishments that were not mailed a form.

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Appendix A.
Explanation of Terms

Employment and related items. The report forms requested separate information on production, development, and exploration workers for a specific payroll period within each quarter of the year and on other employees as of the payroll period which included the 12th of March.

All employees. This item includes all full-time and part-time employees on the payrolls of mining establishments during any part of the pay period which included the 12th of the months specified on the report form. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Also included are employees working for miners paid on a per ton, car, or yard basis. Excluded are employees at the mine but on the payroll of another employer (such as employees of contractors) and employees at company stores, boardinghouses, bunkhouses, and recreational centers. Also excluded are members of the Armed Forces and pensioners carried on the active rolls but not working during the period. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded.

Production, development, and exploration workers. This item includes employees (up through the working-supervisor level) engaged in manual work (using tools, operating machines, hauling materials, loading and hauling products out of the mine in mine cars or trucks, and caring for mines, plants, mills, shops, or yards). Included are exploration work, mine development, storage, shipping, maintenance, repair, janitorial, and guard services, auxiliary production for use at establishments (such as power plant), recordkeeping, and other services closely associated with these production and development operations at the establishment covered by the report. Gang and straw bosses and supervisors who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and persons engaged by them and paid out of the total amount received by these miners. In addition, other employees at the establishment but not on its payroll are included if paid directly through its own employees, such as superintendents and supervisors. The payments received by these types of employees are included as part of the establishments payroll. Employees above the working-supervisor level are excluded from this category.

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

Separately operated auxiliary establishments employees. This item includes employment at separate central administrative offices or auxiliary units of multiestablishment companies and at those offices or units servicing more than one establishment during the payroll period which included March 12. Establishments are classified on the basis of the industry or principal industry served. Employees at an office located at or near the mining establishment are usually included in the mine report.

All employees, average for year. The 1992 census report form requested employment figures for production, development, and exploration workers for four selected pay periods (mid-March, May, August, and November). For all other employees, only a mid-March figure was requested. The annual average is an average of the four monthly figures for production, development, and exploration workers plus the March figure for all other employees. This approach was used to simplify the schedule format and lighten the reporting burden of respondents, since it was found that the average of these selected pay periods closely approximates, for most industries, the average employment for the year that would be obtained from 12 monthly pay periods.

Payroll. This item includes the gross earnings of all employees on the payroll of mining establishments paid in the calendar year 1992. It includes all forms of compensation such as salaries, wages, commissions, payments received on a ton, car, or yard basis, dismissal pay,

bonuses, vacation and sick leave pay, employee contributions to pension plans (such as 401(K) plan), and compensation in kind, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns, and payments to members of Armed Forces and pensioners carried on the active payroll of mining establishments. Also excluded are royalty payments to unions and costs of smithing, explosives, fuses, electric cap lamps, and mine supplies used in production, development, and exploration work but charged to employees and deducted from their wages.

As in the case of employment and establishment figures, the annual payrolls of separate auxiliary establishments of multiestablishment companies are included in the totals for individual industries and for States.

Production-, development-, and exploration-worker hours. This item represents all hours that production, development, and exploration workers worked, both on active days during which there was production or development work and on inactive days when only security guards, inspectors, repair persons, and other maintenance persons were on duty. It includes all hours worked or paid for at the mining operations, except hours paid for vacations, holidays, or sick leave, when the employee was not at the establishment. Included are actual overtime hours, not straight time equivalent hours. Hours of working proprietors or partners and employees of contractors are excluded.

Supplemental labor costs. This item represents employer's cost for fringe benefits not included in payrolls.

Legally required expenditures, including Social Security contributions. This cost includes employer contributions for all programs required under Federal and State legislation, such as Federal Old Age and Survivors' Insurance, unemployment compensation, and worker's compensation. Also included are legally required State temporary disability payments.

Payments for voluntary programs. Included in this cost are payments resulting from union negotiated contracts and all employer payments of insurance premiums on hospital and medical plans, life insurance premiums, and premiums on supplementary accident and sickness insurance. For programs supported by joint employer-employee contributions, only the employer payments are included. Also included are payments or allocations on all pension plans regardless of methods of administration, supplemental unemployment compensation plans, welfare plans, stock purchase plans in which the employer payment is not subject to withholding tax, and deferred profit sharing plans.

Value added by mining. This measure of mining activity is derived by subtracting the cost of supplies, minerals received for preparation, purchased machinery installed, purchased fuel, purchased electricity, and contract work from the sum of the value of shipments (mining products plus receipts for services rendered) and total capital expenditures. This statistic avoids the duplication in value of shipments and receipts which results from the use of products of some establishments as supplies, energy sources, or materials by others. Moreover, it provides a measure of value added not only in mineral production but also in the development of mineral properties. For these reasons, it is considered to be the best value measure for comparing the relative economic importance of mining among industries and geographic areas.

Cost of supplies used, purchased machinery installed, etc. Besides supplies used and purchased machinery installed, this cost includes fuels and electric energy used and contract work done by others for each establishment. It includes charges to both the current and capital accounts. It also includes the cost of items used during 1992 whether they were purchased, withdrawn from inventories, or received from other establishments of the company. For selected supplies and fuels and for electric energy, both quantity and cost data were requested. The cost data refer to direct charges actually paid or payable (after discounts) for items used during the year. Freight charges and other direct charges incurred by the establishment in acquiring the item are included. Companies whose records did not show actual amounts used were asked to approximate use by adding purchases (or receipts) during the year to beginning inventory and subtracting ending inventory. Separate figures were requested for (1) selected supplies used, minerals received for preparation, and purchased machinery installed; (2) electric energy purchased; (3) purchased fuels used for heat, power, or the generation of electricity; (4) contract work done by others; and (5) products bought and resold in the same condition. Supplies and equipment used in mine development, plant expansion, and capitalized repairs, which are chargeable to fixed assets accounts, are included in this item, as are supplies furnished without charge to contractors for use at the mining operation and supplies sold to employees for use at the establishment. Excluded are such costs as advertising, insurance, telephone, and research and consulting services of other establishments or such overhead costs as depreciation charges, rent, interest, and royalties.

Selected supplies used, minerals prepared, etc. In addition to the total cost of supplies used, purchased machinery installed, etc., which every establishment was required to report, information also was collected on the consumption of major supplies used in mining. These inquiries were restricted to supplies which were important parts of the cost of production, exploration, and development of a particular industry and for which cost information was available. Table 7a contains information on specific supplies consumed. On report forms for most mineral industries (except the contract services and the crude petroleum and natural gas industries), a uniform inquiry

was included on minerals prepared at the reported establishments. Figures were obtained on crude minerals mined at the establishment (quantity), received from other establishments of the company or purchased from others (quantity and cost), and received for preparation on a custom or toll basis (quantity and estimated value). Establishments consuming less than a specified amount (usually $25,000) were not required to report the cost of a supply. For small establishments for which administrative records were used, the cost of supplies was included in ''not specified by kind.'' (See Summary of Findings for the importance of administrative records to any industry.)

Value of shipments and receipts. The amounts shown as value of shipments and receipts for each industry (tables 1 through 5), and for individual products or classes of products (table 6), are the net selling values, f.o.b. mine or plant after discounts and allowances, excluding freight charges and excise taxes. Shipments includes all products physically shipped from the establishment during 1992, including material withdrawn from stockpiles and products shipped on consignment, whether or not sold in 1992. Prepared material or concentrates includes preparation from ores mined at the same establishment, purchased, received from other operations of the same company, or received for milling on a custom or toll basis. For products transferred to other establishments of the same company or prepared on a custom basis, companies were requested to report the estimated value, not merely the cost of producing the items. Multiestablishment companies were asked to report value information for each establishment as if it were a separate economic unit. They were instructed to report the value of all products transferred to other plants of the company at their full economic value; to include, in addition to direct cost of production, a reasonable proportion of company overhead and profits.

For all establishments classified in an industry, value of shipments and receipts includes (1) the value of all primary products of the industry, (2) the value of secondary products which are primary to other industries, (3) the receipts for contract work done for others, except custom milling, and (4) the value of products purchased and resold without further processing. Receipts for custom milling are not included to avoid duplication with the value of custom milled ores included in an industry's primary and secondary products. Some duplication exists in industry and industry group totals because of the inclusion of materials transferred from one establishment to another for mineral preparation or resale.

Shipments of individual products. In the 1992 Census of Mineral Industries, information was collected on output for about 150 individual mineral products. In general, the shipments figures of the 1992 and 1987 minerals censuses were confined to separate totals for each crude and each prepared mineral. When shipments were significant, separate figures also were obtained on crude minerals going to preparation plants and those going to consumers.

Figures were collected on both quantity and value of shipments. Shipments includes commercial shipments and transfers of products to other operations of the same company. For products that are used to a significant extent within the same establishment for power or heat, and for minerals mined and prepared in the same establishment, total production figures or separate data on production for such uses were collected. Typically, production also was collected for products for which there was usually significant differences between total production and total shipments because of stock changes.

For service industries, the amount received or due for services performed during 1992 was collected as a measure of output. For mine operators who also perform services, the amount received for such services was added to the total value of products shipped to determine total value of shipments and receipts for each establishment.

Table 6 provides total shipments figures from all industries for each of the products primary to the industry covered.

Capital expenditures. This item covers expenditures made during the year for development and exploration of mineral properties, for new construction, and for purchased machinery chargeable to fixed assets accounts of the mineral establishment. They are the type for which depreciation, depletion, or Office of Minerals Exploration accounts are ordinarily maintained. Capital expenditures during 1992 were determined as ''additions completed during the year plus construction in progress at the end of the year minus construction in progress at the beginning of the year.'' Reported capital expenditures include work done on contract, as well as by the mine forces. Expenditures for machinery and equipment include those made for replacement purposes, as well as those for additions to capacity. Excluded from these expenditures were costs of maintenance and repairs charged as current operating expense and expenditures for land and mineral rights.

Whenever applicable, separate figures were provided for expenditures for development and exploration of mineral property, construction of preparation plants and other construction, new machinery and equipment, used plant, and used equipment acquired from others.

Gross value of depreciable assets. Assets data were collected on buildings, other structures, machinery, equipment, capitalized mineral exploration and development, and mineral land and rights for which depreciation, amortization, or depletion accounts are maintained. The values shown represent the actual cost of assets at the time they were acquired, including all costs incurred in making the assets usable (such as transportation and installation costs). The data were collected for the beginning and end of the year. Assets at the beginning of the year plus new and used capital expenditures minus retirements should equal assets at the end of the year. For new construction

or other improvement projects in progress but not completed by the end of the year, the cumulative capital expenditures were included in the beginning- and end-of-year assets figures.

Retirements. This item represents the gross value of depreciable assets sold, retired, scrapped, destroyed, abandoned, etc., during 1992. The values shown are the acquisition costs of the retired assets. This item also includes the value of assets (at acquisition cost rather than current market value) transferred to other establishments of the same company.

Depreciation. This item shows the reduction in value of depreciable assets brought about through use, gradual obsolescence, or the effect of the elements (decay or corrosion) during the year. Included are charges against assets acquired or completed during the year.

Rental payments. This item consists of rental payments made to other companies for use of such depreciable assets as buildings, other structures, machinery, and equipment. It does not include payments made to the parent company or another subsidiary of the parent company for the use of buildings and equipment owned by the parent company or its subsidiary. The value of such company-owned assets is included in the gross value of depreciable assets.

Rented equipment is reported according to the type of lease negotiated with the lessor. If the lease qualified as an ''operating lease'' the periodic payments made to the producer or the lessor are reported in the rental section. However, if the leasing arrangement met the criteria set down by the Financial Accounting Standards Board for a ''capital lease,'' the original cost or market value of the equipment or building is reported as a value of fixed assets and not as rental payments.

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

Inventories. This item includes inventories of mined or quarried products and supplies, parts, fuels, etc., at the beginning and end of the year. Included as mined or quarried products are stockpiles of products ready for shipment and stocks of raw products awaiting treatment or beneficiation. Beginning with the 1982 Census of Mineral Industries, all respondents were requested to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from the 1977 census in which respondents were permitted to value their inventories using any generally accepted accounting method.

Fuels and electric energy used. This item includes the quantity and cost of fuels and electric energy used in mining. For most industries, separate quantity and cost figures are shown for purchased coal, distillate fuel oil, residual fuel oil, gas, gasoline, and electric energy, and a cost figure is shown for ''other fuels'' (see table 7b). Data also were obtained on the quantity of fuels and electric energy produced and consumed at the same establishment. These data are shown for coal, crude petroleum, and natural gas used at the producing establishments for heat and power, and for electric energy generated and used at the same mining operations. For electric energy, the quantity generated and used is approximated by subtracting the quantity of electric energy sold from the total quantity generated (excluding generating station use).

Appendix B.
Product Code Reference Tables

Part 1. Comparability of Product Classes and Product Codes That Changed: 1992 to 1987

1992	1987
10211 04	10211 03
10211 04	10211 05
10311 04	10311 03
10311 04	10311 05
10411 04	10411 03
10411 04	10411 05
10441 04	10441 03
10441 04	10441 05
10941 02	10941 01
10941 02	10941 03
10941 02	10941 05
10997	10610
10997	10611
10997	10612
10997 00	10610 00
10997 11	10611 00
10997 29	10612 29
10997 31	10612 31
10998	10991
10998	10993
10998	10999
10998 11	10991 11
10998 11	10993 11
10998 11	10999 11
10998 21	10991 21
10998 21	10993 21
10998 21	10999 21
12211 01	12211 04
12211 01	12211 05
12211 01	12211 06
12211 03	12211 14
12211 03	12211 15
12211 03	12211 16
12212 01	12212 07
12212 01	12212 08
12212 01	12212 09
12221 01	12221 04
12221 01	12221 05
12221 03	12221 14
12221 03	12221 15
12222 01	12222 07
12222 01	12222 08
12222 17	12222 18
12311 01	12311 04
12311 03	12311 14
12312 01	12312 07
14110	14111
14110	14115
14110	14119
14110 11	14111 00
14110 15	14115 00
14110 19	14119 00
14591 00	14591 11
14591 00	14591 21
14599 00	14599 11
14599 00	14599 21
14744 00	14744 01
14744 00	14744 03
14752 07	14752 06
14752 07	14752 08
14791 00	14791 12
14791 00	14791 22
14798	14792
14798	14799
14798 00	14792 12
14798 00	14792 22
14798 00	14799 00
14810 19	14810 17
14810 19	14810 20

Part 2. Comparability of Product Classes and Product Codes That Changed: 1987 to 1992

1987	1992
10211 03	10211 04
10211 05	10211 04
10311 03	10311 04
10311 05	10311 04
10411 03	10411 04
10411 05	10411 04
10441 03	10441 04
10441 05	10441 04
10610	10997
10610 00	10997 00
10611	10997
10611 00	10997 11
10612	10997
10612 29	10997 29
10612 31	10997 31
10941 01	10941 02
10941 03	10941 02
10941 05	10941 02
10991	10998
10991 11	10998 11
10991 21	10998 21
10993	10998
10993 11	10998 11
10993 21	10998 21
10999	10998
10999 11	10998 11
10999 21	10998 21
12211 04	12211 01
12211 05	12211 01
12211 06	12211 01
12211 14	12211 03
12211 15	12211 03
12211 16	12211 03
12212 07	12212 01
12212 08	12212 01
12212 09	12212 01
12221 04	12221 01
12221 05	12221 01
12221 14	12221 03
12221 15	12221 03
12222 07	12222 01
12222 08	12222 01
12222 18	12222 17
12311 04	12311 01
12311 14	12311 03
12312 07	12312 01
14111	14110
14111 00	14110 11
14115	14110
14115 00	14110 15
14119	14110
14119 00	14110 19
14591 11	14591 00
14591 21	14591 00
14599 11	14599 00
14599 21	14599 00
14744 01	14744 00
14744 03	14744 00
14752 06	14752 07
14752 08	14752 07
14791 12	14791 00
14791 22	14791 00
14792	14798
14792 12	14798 00
14792 22	14798 00
14799	14798
14799 00	14798 00
14810 17	14810 19
14810 20	14810 19

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Publication Program

1992 CENSUS OF MINERAL INDUSTRIES

Publications of the 1992 Census of Mineral Industries, containing data on establishments primarily engaged in the extraction of minerals, are described below. Publications order forms for the specific reports may be obtained from any Department of Commerce district office or from Data User Services Division, Customer Services, Bureau of the Census, Washington, DC 20233-8300.

Preliminary Reports

Industry series—12 reports (MIC92-I-10A(P) to -14E(P))

Preliminary data from the 1992 census are issued in 12 separate reports covering 31 mineral industries. Preliminary summary data for the United States and States are released in one report.

Final Reports

Industry series—12 reports (MIC92-I-10A to -14E)

Each of the 12 reports provides information for an industry or a group of related industries (e.g., clay, ceramic, and refractory minerals). Final figures for the United States are shown for each of 31 mineral industries on quantity and value of products shipped and supplies used; inventories; quantity and cost of fuels and electric energy purchased and the quantities of fuels produced and consumed; capital expenditures; assets; rents; employment; depreciation, amortization, and depletion; payroll; hours worked; cost of purchased machinery; value added by mining; mineral development, and exploration costs; number of establishments; and number of companies. Comparative statistics for earlier years are included. Industry statistics are shown by State, type of operation, and size of establishment.

Geographic area series—9 reports (MIC92-A-1 to -9)

A separate report for each of the nine geographic divisions presents statistics for individual States and offshore areas for two- and three-digit industry groups by type of operation and by county. Also, data are shown for value of shipments; value added by mining; employment; payroll; hours worked; capital expenditures; cost of supplies, etc.; purchased machinery installed; and number of mining establishments, with comparative 1987 data on employment and value added by mining.

Subject series—2 reports (MIC92-S-1 and -2)

One of these reports is a general national-level summary; the other report contains detailed statistics on fuels and electric energy consumed by mineral industries.

Reference series—1 report (MC92-R-1)

The *Numerical List of Manufactured and Mineral Products* includes a description of the principal products and services published in the 1992 Censuses of Manufactures and Mineral Industries.

Electronic Media

All data included in the printed reports are available on compact disc–read only memory (CD-ROM). The CD-ROM's provide the same information found in the reports. Electronic media products are available for users who wish to summarize, rearrange, or process large amounts of data. These products, with corresponding technical documentation, are sold by Data User Services Division, Customer Services, Bureau of the Census, Washington, DC 20233-8300.

OTHER ECONOMIC CENSUSES REPORTS

Data on retail trade, wholesale trade, service industries, financial, insurance, real estate, construction industries, manufactures, transportation, communications, utilities, enterprise statistics, minority-owned businesses, and women-owned businesses also are available from the 1992 Economic Census. A separate series of reports covers the census of outlying areas—Puerto Rico, Virgin Islands of the United States, Guam, and the Commonwealth of the Northern Mariana Islands. Separate announcements describing these reports are available free of charge from Data User Services Division, Customer Services, Bureau of the Census, Washington, DC 20233-8300.