

DEPARTMENT OF COMMERCE
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FOURTEENTH CENSUS OF THE UNITED STATES
 MINES AND QUARRIES: 1919

COLORADO, NEW MEXICO
 ARIZONA

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EXPLANATION OF TERMS.

Scope of census.—Census statistics of mines and quarries, and petroleum and natural-gas wells are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of enterprises, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census does not cover enterprises which were idle, that is, in which neither productive work nor development work was done during the entire year; or the products of which were valued at less than \$500; or in the case of the bituminous coal mining industry, producing less than 1,000 tons; or, if not productive, in which development work amounting to less than \$5,000 was done.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for enterprises which began or discontinued business during the year.

The enterprise.—As used in the text and tables the term enterprise represents one or more mines and quarries, wells or groups of wells, or natural-gas gasoline plants all within the same State operated under a common ownership or unified control, or for which only one set of books of account was kept, and for which a single report was secured. It may cover plants at several localities within the same State. If plants under unified control were not all located within the same State, separate reports were secured in order that statistics for the several enterprises thus defined might be included in statistics for the States in which they were located. The enterprise is further defined as being limited to a single industry. Separate reports were secured with very few exceptions for each industry conducted by an operator, and only where combined reports on two or more industries could not be separated does a single enterprise cover more than one industry. (See "Classification of industries.") The number of enterprises shown in the tables is equivalent to the number of individual reports tabulated.

Number of mines, quarries, wells, and plants.—Under these designations is given the count of the number of mines, quarries, wells, and gasoline plants shown by the returns received. The unit of enumeration for mines and quarries was difficult to define. As a rule each group of workings at a given locality in which operations were conducted as a unit or were unified by common management or joint handling of some part of the mining process, has been considered as a single mine or quarry. Many individual openings, therefore, are not counted as individual mines. The total number reported comprises those in operation or in the course of development during the year 1919. For petroleum and natural-gas wells the individual wells were counted and the total number productive December 31, 1919, is reported. The number of natural-gas gasoline plants is the total number reported in operation during the year.

Classification by industries.—The enterprises reported have been grouped by industries according to the kind of products. Only a few enterprises made consolidated reports covering more than one kind of product. In such cases classification was determined by the product of chief value.

Selected industries.—The general tables at the end of this bulletin give the principal facts separately for the industries of the State. A selection has been made of the leading industries of the State for more detailed consideration. Industries of greater importance than some of those selected are omitted when they comprise so few enterprises that detailed presentation would reveal the operations of individual concerns.

Influence of increased prices.—In comparing figures for cost of supplies and materials, and value of products, with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the mines and quarries and petroleum and natural-gas industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) technical employees, (5) clerks (including other subordinate salaried employees), and (6) wage earners. In the reports for the census of 1909 the fourth class, technical employees, was not distinguished and was probably included with other salaried employees.

The number of persons engaged in each industry, segregated by occupation, sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date was not a representative day report for another date was requested.

The number of employees other than wage earners thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. The average of wage earners has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by occupation, sex, and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, without distinction of sex or age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day is given in the table of detailed statistics for the industries, in connection with the classification of wage earners by occupation which was made for the representative day. This number is not used in any other way because, in view of the unavoidable variations of date, such a total is believed to be less significant than the average number. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give undue weight to seasonal industries as compared with industries in continuous operation.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, in different occupations, and of widely varying degrees of skill. Furthermore, so far as wage earners

are concerned, it would be impossible to calculate accurately even so simple an average as this, since the number of wage earners fluctuates rapidly and irregularly in every industry, and in some to a very great extent from day to day. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each enterprise. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each enterprise are therefore counted in the class within which the enterprise itself falls. In most enterprises, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital.—The instructions on the schedule for securing data relating to capital were as follows: "The answer should show the total amount of capital, owned and borrowed, invested by the operator in the enterprise on the last day of the business year reported. Do not include securities and loans representing investments in other enterprises." These instructions were identical with those employed at the Census of 1909. The reports received in respect to capital, however, at both censuses, have in so many cases been defective that the data compiled are of value only as indicating very general conditions. While there are some enterprises maintaining accounting systems such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Expenses.—The expenses reported in the Census of 1919 include salaries and wages; the cost of supplies, materials, and fuels, including the freight on these; cost of power purchased; the cost of contract work; royalties and rents paid; and taxes paid or assessed. The Census of 1909 reported in addition to the items of expenses covered by the present census all other items of expense incident to that year's business except interest on indebtedness, dividends, and allowances for depreciation.

Supplies and materials, fuel, and power.—Statistics as to supplies and materials, fuel, and power, relate to the cost of these used during the year which may be more or less than the amount purchased during the year. The term "supplies and materials" covers mine, mill, quarry, and well supplies, and mineral purchased for treatment, resale, or distribution.

Royalties and rents.—The amounts given under this head represent the payment to fee holders or the value of share of product credited to fee holders for mineral output from leased land and also rents paid for plants, equipment, and privileges or easements.

Taxes.—The taxes include Federal capital stock; corporation income, and excess profits tax; and also State, county, and local taxes. The data compiled in respect to Federal taxes are very defective largely for the reason that many mining corporations are engaged in other business and have sources of income other than from mining and do not pay taxes on mining separately. For many of these corporations no data have been obtained; for others satisfactory segregation of mining could not be made.

Expenditures for development work.—The expenses reported as defined above include costs of both productive operation and development work. In the statistics on producing enterprises that part of the expenses for salaries, wages, contract work, supplies and materials, fuel, and power which was credited by the mine operators to development work is shown as expenditures for development work. In the statistics for nonproducing enterprises the total of all these expenses is given as expenditure for development work.

Quantity of products.—In so far as the statistics on quantities of mineral products in 1919 are available for the States, they will be found in the reports of the United States Geological Survey, which has tabulated the statistics on quantities of products collected by the Bureau of the Census in cooperation with the Geological Survey, and will also be presented in the special reports of the Census on the several mining industries.

Value of products.—The amounts given under this heading represent the selling value at point of production or f. o. b. at point of shipment, or such other value as may represent the net value or amount received for the product made in 1919 under the terms by which it was disposed of, and also includes the value at point of production of products used by the operating company.

Cost of mining and profits.—The census data do not show the entire cost of mining and well operations, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest; rent of offices and buildings other than mines, quarries, and wells; insurance, selling, and other sundry expenses.

Lands controlled.—The inquiry on land tenure was confined to land pertaining to the mining or well operations covered by the report. In many of these, however, land held in reserve for future development and for speculative or other purposes not pertaining to mining was included in the returns, and also a large number of more or less unsatisfactory estimates were included. Nevertheless, it is believed that the data presented reflect fairly the conditions as to land tenure in the mining industries, and correctly show the order of magnitude of land holdings pertaining to mining enterprises.

Power used.—The item, aggregate horsepower, represents the horsepower of prime movers used by the enterprises for generating power plus horsepower of motors, principally electric, and other equipment operated by power purchased from other concerns. It does not cover the power of electric motors taking their current from primary power generators operated by the same enterprise (such equipment is reported separately), because its inclusion would obviously result in duplication. The figures on power represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, wood, oil, and gas. They relate to the quantity used during the year, which may be more or less than the quantity purchased. As only the principal varieties of fuel are shown, no comparison can be made with the total cost of all fuel.

COLORADO.

Colorado, which ranks seventh among the states in size (land area, 103,658 square miles) and thirty-third in population (939,629 in 1920), ranked fifteenth in value of mineral products for the year 1919. The state ranked fourteenth in the total number of persons engaged in the mining industries and thirteenth in the average number of wage earners employed.

The gross amount received for products by operators of all mines, quarries, and wells in Colorado in 1919 was \$51,217,038, and in 1909 was \$45,680,135. Deducting from these amounts a duplication of \$4,282,353, the value of gold, silver, lead, and zinc ores sold in 1919 by some producers and further treated and reported by others and for 1909, \$4,930,144, a similar duplication in the value of gold and silver ores and coal, leaves \$46,934,685 and \$40,749,991, the net values of minerals produced in 1919 and 1909, respectively. The net value for 1919 is an increase of 15.2 per cent over the corresponding value for 1909. The amount given as the value of all products includes \$599,012, of which \$361,433 was received for custom milling of ores and minerals and the balance for mineral and other unspecified by-products, power sold, and for miscellaneous services for other enterprises.

Increases in wages, cost of supplies and fuel and power, and in the value of products, as shown in Table 1, are largely due to general price increases and do not correctly indicate growth of mining in Colorado during the census period 1909 to 1919. Nor, on the other hand, is a general decline in mining to be inferred from the decrease shown in the number of enterprises which is chiefly a reflection of the adverse conditions affecting metal mining during 1919 and in part may be the result of consolidation of operations. Probably the most significant facts shown by this table are the very small increase in the capital invested and the decrease in the number of wage earners. The addition of Federal income and excess-profits taxes since 1909 accounts for the increase in taxes shown.

The mining industries reported for 1919, ranked according to value of products, were those engaged in producing coal, gold and silver ores, lead and zinc ores, ores of the rare metals (uranium, vanadium, molybdenum, and tungsten), gold from placer mines, limestone, manganiferous ores, clay, petroleum, granite, fluorspar, pyrite, sandstone, gypsum, copper ores, and graphite. The mineral by-products produced by various industries were as follows: Sandstone from clay mines, silver from manganese mines, lead and zinc ores from pyrite mines, manganese from gold and silver mines, pyrite from copper and lead and zinc mines, and limestone from lead and zinc mines. There

is also included in the total value of products the value of a small quantity of lime which was produced by operators of limestone quarries and was not reported by the census of manufactures.

The mining industries for which statistics can be shown without disclosure of individual operations are ranked by value of products in Table 2, which also shows that in the less important industries different rank is determined by the per cent distribution of the average number of wage earners in each industry.

The statistics for the leading industry, bituminous coal mining, as shown in this report, includes, for convenience and to avoid disclosure of individual operations, the data for two enterprises producing high-rank anthracite. The value of coal produced in 1919 was \$28,342,195, which was 60.4 per cent of the net value of products of all industries in the state. This amount gives Colorado eighth rank in importance among coal-producing states. The coal mining is distributed in 16 counties, and the industry produces a large variety of coals for domestic, steam, and kiln uses and for manufacture of gas and coke.

The mining of precious and base metals, gold, silver, copper, lead, and zinc, was second in importance in the state as measured by value of products. The values reported for the metal-mining industries are based on the net amounts received by the mine and mill operators for ore, concentrates, and bullion, or the estimated equivalent of sales values when products were to be further treated by the producer. These are not the values of the metals produced or recoverable from these materials by smelting and refining. Colorado ranked first among the states in the value of output from its gold and silver lode mines. The production of rare metals, the value of which was \$1,245,014, a larger amount than reported by any other state, was the mining industry next in importance in the state. Colorado also attained high rank, second and third, respectively, in the value of placer gold and manganese ores reported.

In addition to the operations of the producing mines and quarries much mining work was done in Colorado on properties which were not productive during the year. Of these there were reported 60 enterprises: 58 engaged in developing gold, silver, copper, lead, or zinc mines; 1, a vanadium mine; and 1, a coal mine. These enterprises, with a combined capital of over ten million dollars, employed 478 wage earners and expended \$1,332,902 for development during the year, these figures representing 2.8 per cent of the aggregate number of wage earners and the expenditures reported for all mining operations in the state.

The preponderance of the corporation among mining organizations is brought out by Table 3. Corporations controlled 65.6 per cent of all the mining enterprises in the state in 1919, employed 95.8 per cent of the average number of wage earners, and reported 95.8 per cent of the total value of products. Table 3 also shows that while corporate organization of the operating enterprises was characteristic of coal and metal mining industries, it was less marked in the quarrying and clay-mining industries.

The relatively large number of small enterprises as determined by the average number of wage earners employed is shown in Table 4. Of the total number of mining enterprises in Colorado, 77 per cent had fewer than 101 wage earners each, while such enterprises employed only 44.6 per cent of the total number of wage earners. On the other hand, enterprises employing more than 100 wage earners constituted only 9.4 per cent of the total number of enterprises, but employed 55.4 per cent of the total number of wage earners. The coal-mining industry included 73.3 per cent of these larger enterprises.

Table 5 shows that in a majority of the enterprises employing wage earners and for about 75 per cent of

the wage earners in all the mining industries in the state in 1919, the hours of labor were 44 to 53 per week, or that the 8-hour day prevailed. In the coal-mining industry these hours were reported for approximately 93 per cent of the enterprises and 95 per cent of the wage earners. In the metalliferous lode mines 44 to 53 hours per week were reported for about one-half of the enterprises and for 34.2 per cent of the wage earners, but in the other half of the enterprises and for 63.2 per cent of the wage earners the hours of labor were 54 to 62 per week and the 9-hour day prevailed.

The statistics for wage earners given in Table 6, showing the changes in the number employed month by month, reflect conditions prevailing in the industries during the census year. The minimum in the coal industry reported in November, instead of in the summer months as has been usual, was the result of the great November strike and abnormally affects the figures for all industries combined.

Table 7 presents for 1919 statistics in detail for the state as a whole and for each industry that can be shown without the disclosure of individual operations.

TABLE 1.—COMPARATIVE SUMMARY, PRODUCING ENTERPRISES: 1919 AND 1909.

	MINING INDUSTRIES.		Per cent of increase. ¹		MINING INDUSTRIES.		Per cent of increase. ¹
	1919	1909			1919	1909	
Number of enterprises.....	477	672	-29.0	Capital.....	\$147,154,642	\$144,639,558	1.7
Number of mines and quarries.....	523	1,575	-66.8	Principal expenses:			
Number of petroleum and natural-gas wells.....	² 70	76	.....	Salaries.....	2,788,529	2,112,940	32.0
Persons engaged.....	18,502	23,497	-21.3	Wages.....	25,405,043	18,463,296	37.6
Proprietors and firm members, total.....	378	647	-41.6	Contract work.....	397,930	2,996,083	-86.7
Number performing manual labor in or about the mines, quarries, and wells.....	237	232	2.2	Supplies and materials ³	11,954,556	10,389,810	15.1
Salaried employees.....	1,334	1,387	-2.4	Fuel and power.....	2,706,480	1,955,984	38.4
Wage earners (average number).....	16,790	21,483	-21.8	Royalties and rents.....	1,583,712	1,017,447	55.7
Power used (horsepower).....	116,351	98,777	17.8	Taxes.....	1,136,752	542,972	109.4
				Value of products.....	51,217,038	45,680,135	12.1

¹ A minus sign (-) denotes decrease. Percentages are omitted where base is less than 100.

² Petroleum wells only.

³ Includes for 1919 cost of ore, and for 1909 cost of ore and coal, purchased as material.

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TABLE 2.—PRINCIPAL INDUSTRIES, PRODUCING ENTERPRISES, RANKED BY VALUE OF PRODUCTS: 1919.

INDUSTRY.	Number of enterprises.	WAGE EARNERS.		VALUE OF PRODUCTS.		INDUSTRY.	Number of enterprises.	WAGE EARNERS.		VALUE OF PRODUCTS.	
		Average number.	Per cent distribution.	Amount.	Per cent distribution.			Average number.	Per cent distribution.	Amount.	Per cent distribution.
All industries.....	477	16,790	100.0	\$51,217,038	100.0	Limestone.....	14	228	1.4	\$526,738	1.0
Coal, bituminous.....	161	11,252	67.0	28,342,195	55.3	Manganese.....	4	65	0.4	361,940	0.7
Gold and silver, lode mines.....	198	3,495	20.8	16,785,716	32.8	Clay.....	21	59	0.4	174,536	0.3
Lead and zinc.....	27	936	5.6	2,622,150	5.1	Sandstone.....	7	14	0.1	45,723	0.1
Rare metals ¹	9	344	2.0	1,245,014	2.4	Copper.....	5	35	0.2	26,723	0.1
Gold, placer mines.....	5	110	0.7	570,819	1.1	All other industries ²	26	252	1.5	515,484	1.0

¹ Includes molybdenum, tungsten, uranium, and vanadium.

² Includes enterprises in industries as follows: Fluorspar, 4; granite, 8; graphite, 1; gypsum, 2; petroleum, 10; pyrite, 1.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES, PRODUCING ENTERPRISES: 1919.

INDUSTRY AND CHARACTER OF ORGANIZATION.	Number of enterprises.	Number of wage earners.	VALUE OF PRODUCTS.		PER CENT DISTRIBUTION.		
			Total.	Per enterprise.	Enterprises.	Wage earners.	Value of products.
ALL INDUSTRIES.....	477	16,790	\$51,217,038	\$107,373	100.0	100.0	100.0
Corporation.....	313	16,077	49,046,766	156,699	65.6	95.8	95.8
Individual.....	65	283	663,872	10,213	13.6	1.7	1.3
Firm ¹	99	430	1,506,400	15,216	20.8	2.6	2.9
COAL, BITUMINOUS.....	161	11,252	28,342,195	176,038	100.0	100.0	100.0
Corporation.....	132	11,013	27,817,977	210,742	82.0	97.9	98.1
Individual.....	10	74	139,136	13,914	6.2	0.7	0.5
Firm ²	19	165	385,082	20,267	11.8	1.5	1.4
GOLD AND SILVER, LODGE MINES.....	198	3,495	16,785,716	84,776	100.0	100.0	100.0
Corporation.....	112	3,211	15,915,795	142,105	56.6	91.9	94.8
Individual.....	28	119	287,151	10,255	14.1	3.4	1.7
Firm ³	58	165	582,770	10,948	29.3	4.7	3.5
LEAD AND ZINC.....	27	936	2,622,150	97,117	100.0	100.0	100.0
Corporation.....	20	908	2,393,244	119,662	74.1	97.0	91.3
Firm.....	7	28	228,906	32,701	25.9	3.0	8.7
LIMESTONE AND SANDSTONE.....	21	242	572,461	27,260	100.0	100.0	100.0
Corporation.....	10	171	396,226	39,623	47.6	70.7	69.2
Individual ⁴	11	71	176,235	16,021	52.4	29.3	30.8
CLAY.....	21	59	174,536	8,311	100.0	100.0	100.0
Corporation.....	10	25	76,213	7,621	47.6	42.4	43.7
Individual ⁴	11	34	98,323	8,938	52.4	57.6	56.3

¹ Includes 5 other forms of organization.
² Includes 1 other form of organization.

³ Includes 4 other forms of organization.
⁴ Includes 2 firms.

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TABLE 4.—SIZE OF PRODUCING ENTERPRISES, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1919.

INDUSTRY AND WAGE EARNERS PER ENTERPRISE.	ENTERPRISES.		WAGE EARNERS.		INDUSTRY AND WAGE EARNERS PER ENTERPRISE.	ENTERPRISES.		WAGE EARNERS.	
	Number.	Per cent distribution.	Number.	Per cent distribution.		Number.	Per cent distribution.	Number.	Per cent distribution.
ALL INDUSTRIES.....	477	100.0	16,790	100.0	LEAD AND ZINC.....	27	100.0	930	100.0
No wage earners.....	65	13.6			No wage earners.....	2	7.4		
1 to 5.....	141	29.6	363	2.2	1 to 5.....	9	33.3	17	1.9
6 to 20.....	104	21.8	1,110	6.6	6 to 20.....	7	25.9	77	8.2
21 to 50.....	72	15.1	2,539	15.1	21 to 50.....	1	3.7	22	2.4
51 to 100.....	50	10.5	3,481	20.7	51 to 100.....	4	14.8	237	25.3
101 to 500.....	45	9.4	9,297	55.4	101 to 500.....	4	14.8	582	62.2
COAL, BITUMINOUS.....	161	100.0	11,252	100.0	RARE METALS ¹	9	100.0	344	100.0
No wage earners.....	1	0.6			1 to 5.....	2	22.2	3	0.9
1 to 5.....	33	20.5	96	0.9	6 to 20.....	2	22.2	33	9.6
6 to 20.....	17	10.6	200	1.8	21 to 50.....	3	33.3	108	31.4
21 to 50.....	42	26.1	1,530	13.6	51 to 100.....	1	11.1	70	20.3
51 to 100.....	35	21.7	2,500	22.2	101 to 500.....	1	11.1	130	37.8
101 to 500.....	33	20.5	6,926	61.6	LIMESTONE.....	14	100.0	228	100.0
GOLD AND SILVER, LODE MINES.....	198	100.0	3,495	100.0	No wage earners.....	3	21.4		
No wage earners.....	39	19.7			1 to 5.....	4	28.6	15	6.6
1 to 5.....	70	35.4	182	5.2	6 to 20.....	4	28.6	36	15.8
6 to 20.....	57	28.8	581	16.6	21 to 50.....	1	7.1	34	14.9
21 to 50.....	19	9.6	661	18.9	51 to 100.....	2	14.3	143	62.7
51 to 100.....	6	3.0	412	11.8					
101 to 500.....	7	3.5	1,659	47.5					

¹ Includes molybdenum, tungsten, uranium, and vanadium.

TABLE 5.—NUMBER OF PRODUCING ENTERPRISES AND AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED INDUSTRIES: 1919.

INDUSTRY.	TOTAL.		NUMBER WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—									
	Enterprises.	Wage earners.	35 and under.		36 to 43.		44 to 53.		54 to 62.		63 to 71.	
			Enterprises.	Wage earners.	Enterprises.	Wage earners.	Enterprises.	Wage earners.	Enterprises.	Wage earners.	Enterprises.	Wage earners.
All industries.....	442	16,790	3	212	5	110	272	12,549	130	3,917	2	2
Coal, bituminous.....	160	11,252	2	97	4	109	148	10,700	6	346		
Gold and silver, lode mines.....	159	3,495			1	1	84	1,293	74	2,201		
Copper and lead and zinc.....	29	971	1	115			9	236	19	620		
Rare metals ²	9	344							9	344		
Limestone.....	11	228					8	182	3	46		
All other industries.....	44	500					23	138	19	360	2	2

¹ Exclusive of 65 enterprises employing no wage earners in industries as follows: Clay, 9; coal, bituminous, 1; copper, lead, and zinc, 3; fluorspar, 2; gold and silver, lode mines, 39; gold, placer mines, 1; granite, 1; limestone, 3; petroleum, 4; sandstone, 2.² Includes molybdenum, tungsten, uranium, and vanadium.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1919.

[The month of maximum employment for each industry is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

INDUSTRY.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
All industries.....	17,268	18,541	17,978	17,870	17,082	16,124	16,149	16,976	17,635	17,358	17,083	<i>15,736</i>	18,694	84.1
Producing enterprises.....	16,790	18,151	17,600	17,460	16,716	15,723	15,681	16,424	17,086	16,782	16,527	<i>15,175</i>	18,155	83.6
Coal, bituminous.....	11,252	12,028	11,566	11,440	11,131	10,547	10,269	10,988	11,490	11,511	11,224	<i>10,036</i>	12,804	78.3
Gold and silver, lode mines.....	3,495	<i>3,235</i>	3,244	3,322	3,329	3,596	3,751	3,655	3,813	3,471	3,581	3,452	3,491	47.5
Lead and zinc.....	936	1,515	1,444	1,445	1,188	<i>521</i>	577	647	700	747	753	759	986	34.4
Rare metals ¹	344	454	435	361	298	<i>206</i>	313	324	305	340	404	401	347	45.4
Limestone.....	228	327	303	274	276	257	268	273	277	243	87	73	78	22.3
Gold, placer mines.....	110	99	107	109	118	119	115	121	121	<i>95</i>	108	108	100	78.5
Manganese.....	65	114	92	99	121	128	88	83	36	18				14.0
Clay.....	59	45	50	61	52	49	<i>44</i>	57	62	60	75	74	79	55.7
Copper.....	35	38	37	43	31	37	35	38	35	35	32	34	25	58.1
Sandstone.....	14	5	5	8	15	15	15	15	18	31	22	15	4	12.9
All other industries.....	252	291	317	298	267	247	206	223	229	231	241	233	241	65.0
Nonproducing enterprises.....	478	390	378	410	<i>366</i>	401	468	552	549	576	556	551	539	63.5

¹ Includes molybdenum, tungsten, uranium, and vanadium.

MINES AND QUARRIES—COLORADO.

TABLE 7.—DETAILED STATISTICS FOR MINING INDUSTRIES: 1919.

	Aggregate.	PRODUCING ENTERPRISES.				
		Total.	Coal, bituminous.	Gold and silver, lode mines. ¹	Gold, placer mines.	Lead and zinc. ²
Number of enterprises.....	537	477	161	198	5	27
Number of mines and quarries.....	586	523	164	234	7	37
Number of petroleum wells.....	70	70				
Capital.....	\$157,410,128	\$147,154,642	\$66,007,130	\$54,043,972	\$1,827,400	\$10,556,300
Principal expenses:						
Salaries and wages—						
Officers.....	\$713,073	\$681,229	\$474,251	\$117,448	\$4,890	\$58,155
Superintendents and managers.....	\$1,216,395	\$1,121,116	\$538,289	\$363,837	\$19,265	\$91,157
Technical employees.....	\$179,084	\$160,406	\$43,708	\$64,255		\$35,361
Clerks, etc.....	\$849,093	\$823,778	\$520,349	\$117,991	\$3,420	\$134,947
Wage earners.....	\$26,041,700	\$25,405,043	\$16,833,313	\$5,675,926	\$190,508	\$1,435,521
Supplies and materials.....	\$8,075,123	\$7,672,203	\$3,052,028	\$3,259,774	\$141,936	\$523,492
Cost of ore purchased.....	\$4,282,353	\$4,282,353		\$3,964,401		\$310,952
Fuel.....	\$1,310,257	\$1,253,016	\$922,923	\$517,290	\$5,388	\$34,798
Power.....	\$1,494,031	\$1,453,464	\$442,261	\$479,716	\$96,202	\$191,572
Royalties and rents.....	\$1,607,400	\$1,583,712	\$732,430	\$523,205	\$37,427	\$199,660
Taxes.....	\$1,155,735	\$1,136,752	\$623,875	\$354,525	\$11,354	\$75,948
Contract work.....	\$423,985	\$397,930	\$16,381	\$177,130		\$31,838
Expenditures for development (included in the above items).....	\$5,197,011	\$3,564,109	\$1,240,692	\$1,455,315		\$769,131
Value of products.....	\$51,217,038	\$51,217,038	\$28,342,195	\$16,785,716	\$570,819	\$2,622,150
Persons engaged in industry.....	19,105	18,502	12,017	4,077	122	1,094
Proprietors and firm members (total).....	406	378	56	220	3	32
Number performing manual labor.....	240	237	43	144	3	15
Salaries officers.....	228	212	116	66	2	13
Superintendents and managers.....	461	417	184	153	5	26
Technical employees.....	127	110	30	46		24
Clerks, etc.....	615	595	379	67	2	63
Wage earners (average number).....	17,288	16,790	11,252	3,495	110	936
Wage earners by occupation (Dec. 15):						
Above ground (total).....	5,950	5,703	2,772	1,442	112	384
Below ground (total).....	14,510	14,090	10,287	2,509		824
Foremen, shift bosses, etc.—						
Above ground.....	275	247	93	83	6	17
Below ground.....	407	388	218	109		33
Engineers, hoistmen, electricians, mechanics, etc.—						
Above ground.....	1,575	1,507	834	344	24	127
Below ground.....	530	519	351	117		49
Miners, quarrymen, and drillmen, including their helpers—						
Above ground.....	452	428	166	34	22	3
Below ground.....	8,643	8,375	6,655	1,115		377
Timbermen, trackmen, and men engaged in hauling, tramming, etc.—						
Above ground.....	413	397	210	60	3	19
Below ground.....	2,494	2,458	1,487	700		168
Muckers, loaders, laborers, and others not classified—						
Above ground.....	2,360	2,249	1,479	343	57	40
Below ground.....	2,436	2,350	1,576	468		197
Wage earners employed in mills and beneficiating plants—						
Above ground.....	875	875	50	578		178
Number of females included in wage earners reported above—						
Above ground.....	65	44	3	16	6	3
Number of wage earners under 16 years included in those reported above—						
Above ground.....	3	3			1	
Mineral and oil land operated..... acres.....	222,637	211,260	127,881	25,658	6,238	7,506
Land controlled, total..... acres.....	233,798	221,939	131,838	26,960	6,238	8,507
Mineral and oil land owned.....	154,227	148,109	89,608	16,149	4,839	5,442
Mineral and oil land leased.....	68,879	63,657	38,573	9,585	1,399	2,164
Timber and other lands owned and leased.....	10,692	10,293	3,657	1,226		901
Power used: Aggregate horsepower.....	120,995	116,351	63,016	32,506	2,365	12,384
Prime movers (horsepower, total).....	48,407	46,481	31,461	9,436	150	1,079
Steam engines—						
Number.....	506	484	274	75		5
Horsepower.....	41,074	40,012	30,327	6,711		650
Steam turbines—						
Number.....	2	2	2			
Horsepower.....	1,050	1,050	1,050			
Internal-combustion engines—						
Number.....	63	55	4	10		1
Horsepower.....	1,331	1,159	84	150		4
Water wheels, turbines, and motors—						
Number.....	27	21		13	1	6
Horsepower.....	4,952	4,260		2,575	150	1,325
Purchased power (horsepower, total).....	72,588	69,870	31,555	23,070	2,215	10,405
Electric motors operated by purchased current—						
Number.....	1,875	1,802	785	638	51	240
Horsepower.....	72,243	69,680	31,455	22,985	2,215	10,405
Other equipment operated by purchased power—						
Horsepower.....	345	190	100	85		
Electric motors run by current generated by enterprise using:						
Number.....	343	342	253	13		50
Horsepower.....	12,550	12,525	10,481	698		1,000
Fuel used:						
Coal, anthracite..... tons, 2,240 pounds.....	112	112		8	70	34
Coal, bituminous..... tons, 2,000 pounds.....	413,301	409,278	286,884	107,748	350	6,274
Coke..... tons, 2,000 pounds.....	110	110		110		
Wood..... cords.....	2,801	1,109	25	102	717	
Fuel oils..... barrels.....	5,338	4,588		2,395	34	120
Gasoline and other volatile oils..... barrels.....	1,866	1,684	34	288	2	4
Natural gas..... 1,000 cubic feet.....	6,820	6,820				

¹ Includes 4 reduction mills operated independently of mines and 2 operations on dumps and old tailings.
² Includes 1 reduction mill operated independently of mines.

MINES AND QUARRIES—COLORADO.

TABLE 7.—DETAILED STATISTICS FOR MINING INDUSTRIES: 1919—Continued.

	PRODUCING ENTERPRISES—continued.							Nonpro- ducing enterprises. ³
	Rare metals. ²	Lime- stone.	Man- ganese.	Clay.	Sand- stone.	Copper.	All other. ⁴	
Number of enterprises.....	9	14	4	21	7	5	26	60
Number of mines and quarries.....	9	14	4	21	8	5	20	63
Number of petroleum wells.....							70	
Capital.....	\$2,143,903	\$736,551	\$310,000	\$596,823	\$64,450	\$722,255	\$4,145,858	\$10,255,486
Principal expenses:								
Salaries and wages—								
Officers.....	\$11,401	\$542	\$1,500			\$150	\$12,832	\$31,844
Superintendents and managers.....	\$45,173	\$13,567	\$4,300	\$5,300		\$10,400	\$31,828	\$95,279
Technical employees.....	\$15,282					\$1,800		\$18,678
Clerks, etc.....	\$34,070	\$5,206	\$450	\$1,320		\$100	\$7,925	\$23,285
Wage earners.....	\$154,313	\$279,758	\$108,121	\$52,139	\$14,903	\$43,032	\$317,509	\$636,657
Supplies and materials.....	\$360,597	\$78,558	\$16,593	\$20,653	\$3,791	\$17,448	\$197,033	\$402,620
Cost of ore purchased.....	\$7,000							
Fuel.....	\$22,787	\$14,108	\$2,791	\$617	\$400	\$85	\$31,829	\$57,241
Power.....	\$21,605	\$3,428	\$4,928	\$752	\$48	\$490	\$12,402	\$40,667
Royalties and rents.....	\$19,185	\$4,350	\$35,566	\$15,503	\$304	\$392	\$15,690	\$23,658
Taxes.....	\$29,479	\$500	\$1,907	\$1,052	\$329	\$2,716	\$35,067	\$18,983
Contract work.....	\$887	\$102,717		\$42,057	\$19,065		\$7,855	\$26,055
Expenditures for development (included in the above items).....	\$70,569	\$45,763	\$14,600	\$1,672		\$35,149	\$240,218	\$1,332,902
Value of products.....	\$1,245,014	\$326,738	\$361,940	\$174,536	\$45,723	\$26,723	\$515,484	
Persons engaged in industry.....	419	246	83	78	19	45	302	603
Proprietors and firm members (total).....	3	8	14	13	5	3	21	28
Number performing manual labor.....	2	5	3		4	3	15	3
Salaried officers.....	6		1			1	7	16
Superintendents and managers.....	18	7	2	3		4	15	44
Technical employees.....	9					1		17
Clerks, etc.....	39	3	1	3		1	7	20
Wage earners (average number).....	344	228	65	59	14	35	252	478
Wage earners by occupation (Dec. 15):								
Above ground (total).....	392	285	12	81	21	3	199	247
Below ground (total).....	198		135			30	107	420
Foremen, shift bosses, etc.—								
Above ground.....	27	9	1	4	2	1	4	28
Below ground.....	14		6			3	5	19
Engineers, hoistmen, electricians, mechanics, etc.—								
Above ground.....	84	16	11	6		2	50	68
Below ground.....								11
Miners, quarrymen, and drillmen, including their helpers—								
Above ground.....	84	92		18	17		52	24
Below ground.....	113		44			17	54	288
Timbermen, trackmen, and men engaged in hauling, tramping, etc.—								
Above ground.....	39	53					13	16
Below ground.....	58		14			3	28	36
Muckers, loaders, laborers, and others not classified—								
Above ground.....	112	115		53	2		48	111
Below ground.....	13		71			5	20	86
Wage earners employed in mills and beneficiating plants—								
Above ground.....	46						23	
Number of females included in wage earners reported above—								
Above ground.....	10					1	5	21
Number of wage earners under 16 years included in those reported above—								
Above ground.....	2							
Mineral and oil land operated..... acres.....	11,896	3,004	55	11,159	504	709	16,560	11,377
Land controlled, total..... acres.....	11,921	3,004	55	11,559	504	733	20,600	11,859
Mineral and oil land owned.....	11,888	2,121	28	9,740	461	638	7,195	6,118
Mineral and oil land leased.....	8	883	27	1,419	43	71	9,365	5,342
Timber and other lands owned and leased.....	25			400		44	4,040	399
Power used: Aggregate horsepower.....	2,296	521	270	269	87	25	2,612	4,844
Prima movers (horsepower, total).....	723	273	145	38	83		2,193	1,926
Steam engines—								
Number.....	1	4	3	1	2		119	22
Horsepower.....	80	160	145	8	83		1,848	1,062
Steam turbines—								
Number.....								
Horsepower.....								
Internal-combustion engines—								
Number.....	16	5		2			17	8
Horsepower.....	433	113		30			345	172
Water wheels, turbines, and motors—								
Number.....	1							6
Horsepower.....	210							692
Purchased power (horsepower, total).....	1,573	248	125	231	4	25	419	2,718
Electric motors operated by purchased current—								
Number.....	38	6	3	13	1	2	25	73
Horsepower.....	1,373	248	125	231	4	25	414	2,593
Other equipment operated by purchased power—								
Number.....							5	155
Horsepower.....								25
Electric motors run by current generated by enterprise using:								
Number.....	26							1
Horsepower.....	346							25
Fuel used:								
Coal, anthracite..... tons, 2,240 pounds.....								
Coal, bituminous..... tons, 2,000 pounds.....	1,491	2,353	457	36	75	10	3,600	4,023
Coke..... tons, 2,000 pounds.....								
Wood..... cords.....	260							1,692
Fuel oils..... barrels.....	300							750
Gasoline and other volatile oils..... barrels.....	805	257		19			1,739	182
Natural gas..... 1,000 cubic feet.....							275	
							6,820	

² Includes molybdenum, tungsten, uranium, and vanadium.

⁴ Includes enterprises as follows: Fluorspar, 4; granite, 8; graphite, 1; gypsum, 2; petroleum, 10; pyrite, 1.

³ Includes enterprises as follows: Coal, bituminous, 1; gold, silver, copper, lead, or zinc, 58; vanadium, 1.

NEW MEXICO.

New Mexico, which ranks fourth among the states in size (land area 122,503 square miles) and forty-fourth in population (360,350 in 1920), ranked twenty-fourth in the value of mineral products for 1919. The state ranked twenty-fourth in the total number of persons engaged and twenty-third in the average number of wage earners employed in the mining industries.

The gross amount received for products by operators of all mines and quarries and wells in New Mexico in 1919 was \$18,872,560. Deducting from this amount a duplication of \$9,506, the value of gold and silver ores sold in 1919 by some producers and further treated and reported by others, leaves \$18,863,054, the net value of minerals produced in 1919. This was an increase of 237.6 per cent over the corresponding amount for 1909 (\$5,587,744). The amount stated as total value of products in 1919 includes, in addition to the value of the mineral product indicated by the industry designation, \$45,308, the aggregate received by operators of mining enterprises for custom milling, power sold, and for miscellaneous work or services for other enterprises.

A decrease in the number of enterprises and in the number of individual mines and quarries operated in New Mexico is shown by Table 1. While such decreases were undoubtedly actual they were due to the suspension of small operations. Increases in the number of wage earners employed and in the capital invested are more significant and indicate progress in the mining industries. The increases in the principal expenses and in value of products, although due to some extent to general price increases, show substantial growth in mining operations. The large increase in taxes shown is due to the addition of Federal income taxes since 1909.

The mining industries reported for 1919, ranked according to value of products, were bituminous coal, copper, gold and silver (lode mining), iron ore, lead and zinc, gypsum, manganese, molybdenum, silica, fluor-spar, mica, clay, gold (placer mines), and petroleum. The industries for which the statistics can be shown without disclosure of individual operations are ranked by value of products in Table 2.

The value of products of the coal-mining industry in New Mexico, in 1919, was \$9,905,541, which was 52.5 per cent of the value of products of all industries in the state. Colfax and McKinley Counties produced most of the coal, while Lincoln, Rio Arriba, San Juan, Santa Fe, and Socorro Counties were also productive. The statistics for bituminous coal min-

ing includes, for convenience and to avoid disclosure of individual operations, the data for a mining enterprise operating three anthracite mines.

The mining of gold, silver, copper, lead, and zinc ores was second in importance in the state as measured by value of products. Metal-mining operations were reported from seven counties, of which Grant was by far the most productive. The values reported for products of the metal mining industries are based on the net amount received by the mine and mill operators for ore, concentrates, and bullion marketed, or the estimated equivalent of sales values when such products were to be further treated by the producer. The values reported are not the values of the metals produced or recoverable from these materials by smelting and refining.

Some mining work was done in New Mexico on properties which were not productive during the census year. Eighteen enterprises were reported thus engaged: 17, in developing gold, silver, copper, lead or zinc mines; and 1, a manganese mine. These enterprises, with combined capital of \$3,711,293, employed 116 wage earners and expended \$296,233 for development. These figures constitute only a small part of the aggregate number of wage earners and expenditures reported.

The extent of control of mining operations by corporate organizations is brought out by Table 3. Of all the enterprises, 51.8 per cent were corporations and these employed 95.1 per cent of the wage earners and reported 97.3 per cent of the value of products of the mining industries. Two-thirds of the enterprises in the coal-mining industry were corporations, and these reported practically all of the wage earners and value of products for the coal industry. In the gold, silver, copper, lead and zinc mining industries 46.5 per cent, a somewhat smaller share of the number of enterprises, were corporate in form of organization, but these enterprises dominated the industry, reporting 95.7 per cent and 98 per cent, respectively, of the number of wage earners and value of products.

The relatively large number of small enterprises, as measured by the number of wage earners employed per enterprise, is shown by Table 4. Of the total number of enterprises, 7.1 per cent had no wage earners and 71.8 per cent having fewer than 51 reported only 9.7 per cent of the total number of wage earners. On the other hand, 11 enterprises, or 13 per cent of the total number, employing more than 100 wage earners each, reported 83 per cent of the

MINES AND QUARRIES—NEW MEXICO.

entire number for the state. The 5 enterprises employing more than 500 wage earners each are in the bituminous coal and lode mining industries and these employed approximately 65 per cent of all the wage earners.

Table 5 shows that the prevailing hours of labor in 46 enterprises, or 58.2 per cent of the 79 enterprises employing wage earners, were 44 to 53 per week, and in 32, or 40.5 per cent, 54 to 62 hours per week. In both these classes of enterprises, together employing 80.3 per cent of the total number of wage earners in all mining industries, the prevailing hours per day were 8, but most of those in the coal-mining industry were in operation 6 days in the week, while

a majority in the metal-mining industries operated 7 days per week.

The statistics for wage earners given in Table 6, showing changes in the number employed from month to month, reflect conditions prevailing in the industries during the census year. The minimum number employed in November is due to the strike in the coal industry resulting in the smallest number being reported in November rather than, as usual, during the summer.

Table 7 presents for 1919 statistics in detail for the state as a whole and for each industry that can be shown without the disclosure of individual operations.

TABLE 1.—COMPARATIVE SUMMARY, PRODUCING ENTERPRISES: 1919 AND 1909.

	MINING INDUSTRIES.		Per cent of increase. ¹		MINING INDUSTRIES.		Per cent of increase. ¹
	1919	1909			1919	1909	
Number of enterprises.....	85	98		Capital.....	\$98,994,713	\$40,125,674	134.3
Number of mines and quarries.....	133	285	-53.3	Principal expenses:			
Number of petroleum wells.....	1			Salaries.....	1,151,046	445,134	158.6
Persons engaged.....	7,607	5,537	37.4	Wages.....	10,493,857	3,529,356	197.3
Proprietors and firm members, total.....	69	86		Contract work.....	131,506	132,535	-0.8
Number performing manual labor in or about the mines and quarries.....	29	39		Supplies and materials.....	² 3,889,454	805,487	382.9
Salaried employees.....	438	344	27.3	Fuel and power.....	1,361,210	203,033	570.3
Wage earners (average number).....	7,100	5,107	39.0	Royalties and rents.....	181,504	78,995	129.8
Power used (horsepower).....	59,876	16,042	273.2	Taxes.....	835,920	40,410	1,968.6
				Value of products.....	18,872,560	5,587,744	237.7

¹ A minus sign (—) denotes decrease. Percentages are omitted where base is less than 100.

² Includes cost of ore purchased as material.

TABLE 2.—PRINCIPAL INDUSTRIES, PRODUCING ENTERPRISES, RANKED BY VALUE OF PRODUCTS: 1919.

INDUSTRY.	Number of enterprises.	WAGE EARNERS.		VALUE OF PRODUCTS.		INDUSTRY.	Number of enterprises.	WAGE EARNERS.		VALUE OF PRODUCTS.	
		Average number.	Per cent distribution.	Amount.	Per cent distribution.			Average number.	Per cent distribution.	Amount.	Per cent distribution.
All industries.....	85	7,100	100.0	\$18,872,560	100.0	Gold, silver, copper, lead, and zinc, lode mines.....	43	3,057	43.1	\$8,135,067	43.1
Coal, bituminous.....	21	3,564	50.2	9,905,541	52.5	All other industries ¹	21	479	6.7	831,952	4.4

¹ Includes enterprises in industries as follows: Clay, 1; fluorspar, 7; gold, placer mines, 1; gypsum, 1; iron ore, 5; manganese, 1; mica, 2; molybdenum, 1; petroleum, 1; silica, 1.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES, PRODUCING ENTERPRISES: 1919.

INDUSTRY AND CHARACTER OF ORGANIZATION.	Number of enterprises.	Number of wage earners.	VALUE OF PRODUCTS.		PER CENT DISTRIBUTION.		
			Total.	Per enterprise.	Enterprises.	Wage earners.	Value of products.
ALL INDUSTRIES.....	85	7,100	\$18,872,560	\$222,030	100.0	100.0	100.0
Corporation.....	44	6,750	18,387,090	417,434	51.8	95.1	97.3
Individual.....	22	162	302,494	13,750	25.9	2.3	1.6
Firm.....	19	188	202,976	10,683	22.4	2.6	1.1
COAL, BITUMINOUS.....	21	3,564	9,905,541	471,692	100.0	100.0	100.0
Corporation.....	14	3,444	9,669,144	690,653	66.7	96.6	97.6
Individual.....	7	120	236,397	33,771	33.3	3.4	2.4
GOLD, SILVER, COPPER, LEAD, AND ZINC, LODGE MINES.....	43	3,057	8,135,067	189,188	100.0	100.0	100.0
Corporation.....	20	2,925	7,969,802	398,490	46.5	95.7	98.0
Individual.....	13	58	94,755	7,289	30.2	1.9	1.2
Firm.....	10	74	70,510	7,051	23.3	2.4	0.9

¹ Includes 2 firms.

MINES AND QUARRIES—NEW MEXICO.

TABLE 4.—SIZE OF PRODUCING ENTERPRISES, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1919.

INDUSTRY AND WAGE EARNERS PER ENTERPRISE.	ENTERPRISES.		WAGE EARNERS.		INDUSTRY AND WAGE EARNERS PER ENTERPRISE.	ENTERPRISES.		WAGE EARNERS.	
	Number.	Per cent distribution.	Number.	Per cent distribution.		Number.	Per cent distribution.	Number.	Per cent distribution.
ALL INDUSTRIES.....	85	100.0	7,100	100.0	GOLD, SILVER, COPPER, LEAD, AND ZINC, LOBE MINES.....	43	100.0	3,057	100.0
No wage earners.....	6	7.1	.....	.....	No wage earners.....	3	7.0	.....	.....
1 to 5.....	27	31.8	64	0.9	1 to 5.....	14	32.6	34	1.1
6 to 20.....	24	28.2	286	4.0	6 to 20.....	14	32.6	155	5.1
21 to 50.....	10	11.8	344	4.8	21 to 50.....	5	11.6	176	5.8
51 to 100.....	7	8.2	514	7.2	51 to 100.....	2	4.7	156	5.1
101 to 500.....	6	7.1	1,324	18.7	101 to 500.....	3	7.0	454	14.9
501 to 1,000.....	4	4.7	3,174	44.7	501 to 1,000.....	1	2.3	688	22.5
Over 1,000.....	1	1.2	1,394	19.6	Over 1,000.....	1	2.3	1,394	45.6
COAL, BITUMINOUS.....	21	100.0	3,564	100.0					
No wage earners.....	1	4.8	.....	.....			
1 to 5.....	4	19.0	6	0.2					
6 to 20.....	5	23.8	66	1.9					
21 to 50.....	2	9.5	48	1.3					
51 to 100.....	4	19.0	302	8.5					
101 to 500.....	2	9.5	656	18.4					
501 to 1,000.....	3	14.3	2,486	69.8					

TABLE 5.—NUMBER OF PRODUCING ENTERPRISES AND AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED INDUSTRIES: 1919.

INDUSTRY.	TOTAL.		NUMBER WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—					
	Enterprises.	Wage earners.	44 to 53.		54 to 62.		63 to 71.	
			Enterprises.	Wage earners.	Enterprises.	Wage earners.	Enterprises.	Wage earners.
All industries.....	179	7,100	46	4,604	32	1,102	1	1,394
Coal, bituminous.....	20	3,564	19	3,556	1	8	.....	.....
Gold, silver, copper, lead, and zinc, lode mines.....	40	3,057	17	914	22	749	1	1,394
All other industries.....	19	479	10	134	9	345	.....	.....

¹ Exclusive of 6 enterprises employing no wage earners in industries as follows: Clay, 1; coal, bituminous, 1; gold, silver, copper, lead, and zinc, 3; petroleum, 1.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1919.

[The month of maximum employment for each industry is indicated by bold-faced figures and that of minimum employment by italic figures.]

INDUSTRY.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
All industries.....	7,216	8,226	7,669	7,527	7,321	7,133	6,971	6,692	7,227	7,234	7,097	<i>6,507</i>	6,988	79.1
Producing enterprises.....	7,100	8,152	7,584	7,437	7,236	7,013	6,836	6,561	7,084	7,102	6,975	<i>6,380</i>	6,840	78.3
Coal, bituminous.....	3,564	4,029	3,840	4,000	3,773	3,541	3,364	3,127	3,455	3,395	3,541	<i>2,987</i>	3,716	74.1
Gold, silver, copper, lead, and zinc, lode mines.....	3,057	3,547	3,185	2,846	2,854	2,871	2,886	2,954	3,086	3,146	3,196	<i>3,198</i>	2,915	80.2
All other industries.....	479	576	559	591	609	601	586	480	543	561	233	<i>195</i>	209	32.0
Nonproducing enterprises.....	116	74	85	90	85	120	135	131	143	132	122	127	148	50.0

MINES AND QUARRIES—NEW MEXICO.

TABLE 7.—DETAILED STATISTICS FOR MINING INDUSTRIES: 1919.

	Aggregate.	PRODUCING ENTERPRISES.				Non-producing enterprises. ²
		Total.	Coal, bituminous.	Gold, silver, copper, lead, and zinc, lode mines.	All other. ¹	
Number of enterprises.....	103	85	21	43	21	18
Number of mines and quarries.....	152	133	64	46	23	10
Number of petroleum wells.....	1	1			1	
Capital.....	\$97,706,006	\$93,994,713	\$40,197,139	\$52,426,329	\$1,371,245	\$3,711,293
Principal expenses:						
Salaries and wages—						
Officers.....	\$150,663	\$132,305	\$90,728	\$35,384	\$8,193	\$18,358
Superintendents and managers.....	\$403,842	\$381,537	\$168,851	\$180,273	\$32,713	\$22,005
Technical employees.....	\$225,418	\$219,107	\$69,861	\$151,647	\$3,599	\$6,311
Clerks, etc.....	\$422,394	\$417,797	\$194,851	\$225,937	\$17,009	\$4,867
Wage earners.....	\$10,710,390	\$10,493,857	\$5,641,744	\$4,392,432	\$489,651	\$216,533
Supplies and materials.....	\$3,988,435	\$3,879,945	\$975,742	\$2,723,089	\$181,126	\$58,487
Cost of ore purchased.....	\$9,506	\$9,506		\$9,506		
Fuel.....	\$1,320,335	\$1,292,260	\$130,254	\$1,108,827	\$47,179	\$28,075
Power.....	\$99,316	\$65,950	\$67,201	\$1,749		\$366
Royalties and rents.....	\$183,443	\$181,504	\$97,167	\$74,145	\$10,192	\$1,939
Taxes.....	\$838,681	\$835,920	\$335,575	\$493,115	\$7,230	\$2,761
Contract work.....	\$133,035	\$131,506	\$102,859	\$17,355	\$11,292	\$1,529
Expenditures for development (included in the above items).....	\$3,517,694	\$3,221,461	\$120,839	\$3,023,308	\$77,314	\$296,233
Value of products.....	\$18,872,560	\$18,872,560	\$9,905,541	\$8,135,007	\$831,952	
Persons engaged in industry.....	7,760	7,607	3,774	3,301	532	153
Proprietors and firm members (total).....	72	69	10	30	20	3
Number performing manual labor.....	31	29	3	19	7	2
Salaried officers.....	27	20	13	4	7	7
Superintendents and managers.....	119	108	54	38	16	11
Technical employees.....	113	105	40	62	3	8
Clerks, etc.....	213	205	93	101	11	8
Wage earners (average number).....	7,216	7,100	3,564	3,057	479	116
Wage earners by occupation (Dec. 15):						
Above ground (total).....	2,919	2,812	815	1,684	313	107
Below ground (total).....	4,806	4,678	2,893	1,359	426	128
Foremen, shift bosses, etc.—						
Above ground.....	74	65	21	36	8	9
Below ground.....	136	124	61	52	11	12
Enginemen, hoistmen, electricians, mechanics, etc.—						
Above ground.....	887	840	369	429	42	47
Below ground.....	243	224	121	97	6	19
Miners, quarrymen, and drillmen, including their helpers—						
Above ground.....	126	117		68	49	9
Below ground.....	2,775	2,718	1,974	523	221	57
Timbermen, trackmen, and men engaged in hauling, tramming, etc.—						
Above ground.....	264	259	41	208	10	5
Below ground.....	820	793	604	156	33	27
Muckers, loaders, laborers, and others not classified—						
Above ground.....	833	796	289	359	148	37
Below ground.....	832	819	133	531	155	13
Wage earners employed in mills and beneficiating plants—						
Above ground.....	735	735	95	584	56	
Number of females included in wage earners reported above—						
Above ground.....	2	1	1			1
Number of wage earners under 16 years of age, included in those reported above—						
Above ground.....	4	4		1	3	
Mineral and oil land operated..... acres.....	679,256	673,051	641,125	23,012	8,914	6,205
Land controlled, total..... acres.....	718,264	711,871	657,160	45,797	8,914	6,393
Mineral and oil land owned.....	647,041	642,019	614,619	19,370	8,030	5,022
Mineral land leased.....	32,275	31,092	26,506	3,702	884	1,183
Timber and other lands owned and leased.....	38,948	38,760	16,035	22,725		188
Power used: Aggregate horsepower.....	61,383	59,876	18,063	40,199	1,614	1,507
Prime movers (horsepower, total).....	56,468	55,031	13,333	40,084	1,614	1,437
Steam engines—						
Number.....	89	66	15	41	10	23
Horsepower.....	23,774	22,579	2,745	18,904	930	1,195
Steam turbines—						
Number.....	55	55	11	44		
Horsepower.....	22,779	22,779	10,548	12,231		
Internal-combustion engines—						
Number.....	111	94	2	80	12	17
Horsepower.....	9,895	9,653	40	8,949	664	242
Water wheels, turbines, and motors—						
Number.....	1	1			1	
Horsepower.....	20	20			20	
Purchased power (horsepower, total).....	4,915	4,845	4,730	115		70
Electric motors operated by purchased current—						
Number.....	131	130	125	5		1
Horsepower.....	4,915	4,845	4,730	115		70
Electric motors run by current generated by enterprise using:						
Number.....	1,257	1,257	250	1,006	1	
Horsepower.....	24,854	24,854	5,104	19,742	8	
Fuel used:						
Coal, bituminous..... tons.....	235,566	232,846	45,834	182,572	4,440	2,720
Coke..... tons.....	62	62		62		
Wood..... cords.....	861	337		127	260	474
Fuel oils..... barrels.....	50,849	50,784		49,154	1,630	65
Gasoline and other volatile oils..... barrels.....	2,032	1,904	14	1,591	299	178

¹ Includes enterprises as follows: Clay, 1; fluor spar, 7; gold, placer mines, 1; gypsum, 1; iron ore, 5; manganese, 1; mica, 2; molybdenum, 1; petroleum, 1; silica, 1.
² Includes enterprises as follows: Gold, silver, copper, lead or zinc, 17; manganese, 1.

ARIZONA.

Arizona, which ranks fifth among the states in size (land area 113,810 square miles) and forty-sixth in population (334,162 in 1920), ranked twelfth in value of mineral products for 1919. The state ranked sixteenth in the total number of persons engaged in the mining industries and in the average number of wage earners employed.

The gross amount received for products by the operators of all mines and quarries in Arizona in 1919 was \$88,478,111, which includes a duplication of \$1,528,056, representing the value of copper ores sold by some producers and resold or used after treatment by others. Thus, the net value of products was \$86,950,055, which was an increase of 164.7 per cent over the corresponding figures, \$32,847,260, for 1909. The amount given as value of products includes \$752,152, which was received for mineral by-products, for custom milling, power sold, and miscellaneous services performed for other enterprises. The value of products reported for the precious and base metal mining industries in 1919 includes the net amounts received for ore concentrates, cement copper, and bullion, by mine and mill operators, or the estimated equivalent of sales value when the products were further treated and not sold, and does not represent the value of the metals produced or recoverable from these materials by smelting and refining. The preceding census of mines and quarries included statistics on smelters operated in connection with copper mines in Arizona and, therefore, the value of products and also other items relating to the copper industry in this state, reported for 1919 and 1909, are not entirely comparable.

The progress of mining in Arizona, during the census period 1909-1919, is shown in Table 1. It is better gauged by increases in number of enterprises, persons engaged in the industries, and average number of wage earners than by the large increases in the principal expenses and in the value of products which are largely due to general price increases.

The mining industries reported for 1919, ranked according to value of products, were those engaged in producing copper ores, gold and silver ores, asbestos, limestone, granite, lead and zinc ores, sandstone, gypsum, manganese ore, and gold from placer mines.

Mineral by-products were reported as follows: Manganese ore from a silver mine, silica from a limestone quarry, and rare metals (tungsten) from a copper mine.

The mining industries for which statistics can be shown without disclosure of individual operations are ranked by value of products in Table 2, which also shows that in the less important industries different rank is determined by the per cent distribution of the average number of wage earners in each industry.

Copper is the leading mining industry in Arizona and in 1919, with a net value of products amounting to \$82,689,085, it represented 95.1 per cent of the net value of all mineral products in the state. Furthermore, Arizona ranks first among the states in the production of copper. The only other mineral industry of importance was gold and silver mining (lode mines) for which products valued at \$3,523,447 were reported. The metalliferous mines are widely distributed throughout the state, but were most important in 1919 in 12 districts, in Cochise, Gila, Greenlee, Pima, Pinal, and Yavapai Counties.

In addition to the operations of the producing mines and quarries, considerable work was done in Arizona on properties which were not productive during the year. Of these there were reported 95 enterprises engaged in developing 96 metalliferous lode mines, 1 of them a molybdenum mine, and the remainder copper, gold, silver, lead, or zinc mines. These enterprises, with a combined capital of over thirty million dollars, employed 798 wage earners and expended \$3,078,718 for development during the year, these figures representing approximately 5 per cent of the aggregate number of wage earners and of the aggregate expenditures reported for all mining operations of the state.

The extent of control of mining enterprises by corporate organizations is brought out by Table 3. Corporations conducted 63.2 per cent of all the mining enterprises in the state in 1919, employed 97.9 per cent of the average number of wage earners, and reported 99.3 per cent of the total value of products.

The relatively large number of small enterprises, as determined by the average number of wage earners employed, is shown in Table 4. Of the total number of mining enterprises in Arizona, 10.3 per cent had no wage earners and 74.1 per cent had fewer than 101 wage earners each, and these enterprises employed only 8.8 per cent of the total number of wage earners. On the other hand, enterprises employing more than 100 wage earners constituted only 15.5 per cent of the total number of enterprises, but employed 91.3 per

cent of the total number of wage earners. The copper-mining industry included 87.5 per cent of these larger enterprises.

Table 5 shows that in more than half the mining enterprises employing wage earners the prevailing hours of labor per week were 54 to 62, and in practically all the other enterprises 44 to 53. The 8-hour day prevailed generally, and the normal hours of labor per week were 56 in a majority of the mines and 48 in most of the remainder.

The statistics for wage earners in Table 6, showing the changes in employment month by month, reflect conditions prevailing during the census year. The minima shown are probably abnormal, because of adverse metal market conditions and minor labor difficulties in some mining districts.

Table 7 presents for 1919 statistics in detail for the state as a whole and for each industry that can be shown without the disclosure of individual operations.

TABLE 1.—COMPARATIVE SUMMARY, PRODUCING ENTERPRISES: 1919 AND 1909.

	MINING INDUSTRIES.		Per cent of increase. ¹		MINING INDUSTRIES.		Per cent of increase. ¹
	1919	1909			1919	1909	
Number of enterprises.....	155	135	14.8	Capital.....	\$402,419,671	\$119,772,781	236.0
Number of mines and quarries.....	172	251	-31.5	Principal expenses:			
Persons engaged.....	16,831	13,491	24.8	Salaries.....	3,759,329	1,018,180	269.2
Proprietors and firm members, total.....	165	100	5.0	Wages.....	26,193,312	13,502,760	94.0
Number performing manual labor in or about the mines and quarries.....	68	61	10.3	Contract work.....	746,783	238,982	212.5
Salaried employees.....	1,458	553	163.7	Supplies and materials ²	10,160,891	6,929,758	133.2
Wage earners (average number).....	15,268	12,838	18.9	Fuel and power.....	5,377,525	5,603,989	-4.0
Power used (horsepower).....	106,091	47,272	251.4	Royalties and rents.....	438,926	8,256	.....
				Taxes.....	7,752,425	431,829	.....
				Value of products.....	88,478,111	34,217,651	158.6

¹ A minus sign (-) denotes decrease. Percentages are omitted where base is less than 100.

² Includes cost of ore purchased as material.

TABLE 2.—PRINCIPAL INDUSTRIES, PRODUCING ENTERPRISES, RANKED BY VALUE OF PRODUCTS: 1919.

INDUSTRY.	Number of enterprises.	WAGE EARNERS.		VALUE OF PRODUCTS.		INDUSTRY.	Number of enterprises.	WAGE EARNERS.		VALUE OF PRODUCTS.	
		Average number.	Per cent distribution.	Amount.	Per cent distribution.			Average number.	Per cent distribution.	Amount.	Per cent distribution.
All industries.....	155	15,268	100.0	\$88,478,111	100.0	Limestone.....	4	45	0.3	\$153,211	0.2
Copper.....	75	14,237	93.2	84,217,141	95.2	Granite.....	3	58	0.4	128,777	0.1
Gold and silver, lode mines.....	51	642	4.2	3,523,447	4.0	Lead and zinc.....	15	101	0.7	127,843	0.1
						All other industries ¹	7	185	1.2	327,692	0.4

¹ Includes enterprises in industries as follows: Asbestos, 2; gold, placer mines, 1; gypsum, 1; manganese, 1; sandstone, 2.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES, PRODUCING ENTERPRISES: 1919.

INDUSTRY AND CHARACTER OF ORGANIZATION.	Number of enterprises.	Number of wage earners.	VALUE OF PRODUCTS.		PER CENT DISTRIBUTION.		
			Total.	Per enterprise.	Enterprises.	Wage earners.	Value of products.
ALL INDUSTRIES.....	155	15,268	\$88,478,111	\$570,827	100.0	100.0	100.0
Corporation.....	98	14,946	87,877,574	896,710	63.2	97.9	99.3
Individual.....	26	213	355,317	13,666	18.8	1.4	0.4
Firm ¹	31	109	245,220	7,910	20.0	0.7	0.3
COPPER.....	75	14,237	84,217,141	1,122,895	100.0	100.0	100.0
Corporation.....	54	14,077	83,907,006	1,553,833	72.0	98.9	99.6
Individual.....	10	123	240,396	24,040	13.3	0.9	0.3
Firm ¹	11	37	69,739	6,340	14.7	0.3	0.1
GOLD AND SILVER, LODE MINES.....	51	642	3,523,447	69,087	100.0	100.0	100.0
Corporation.....	26	595	3,395,007	130,577	51.0	92.7	96.4
Individual.....	9	21	15,113	1,879	17.6	3.3	0.4
Firm.....	16	26	113,327	7,083	31.4	4.0	3.2
LEAD AND ZINC.....	15	101	127,843	8,523	100.0	100.0	100.0
Corporation.....	7	61	76,783	10,969	46.7	60.4	60.1
Individual ²	8	40	51,060	6,383	53.3	39.6	39.9

¹ Includes 1 other form of organization.

² Includes 2 firms.

MINES AND QUARRIES—ARIZONA.

TABLE 4.—SIZE OF PRODUCING ENTERPRISES, BY AVERAGE NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1919.

INDUSTRY AND WAGE EARNERS PER ENTERPRISE.	ENTERPRISES.		WAGE EARNERS.		INDUSTRY AND WAGE EARNERS PER ENTERPRISE.	ENTERPRISES.		WAGE EARNERS.	
	Number.	Per cent distribution.	Number.	Per cent distribution.		Number.	Per cent distribution.	Number.	Per cent distribution.
ALL INDUSTRIES.....	155	100.0	15,268	100.0	GOLD AND SILVER, LODE MINES...	51	100.0	642	100.0
No wage earners.....	16	10.3			No wage earners.....	8	15.7		
1 to 5.....	56	36.1	135	0.9	1 to 5.....	23	45.1	40	7.2
6 to 20.....	36	23.2	390	2.6	6 to 20.....	14	27.5	136	21.2
21 to 50.....	21	13.5	649	4.2	21 to 50.....	4	7.8	135	21.0
51 to 100.....	2	1.3	167	1.1	101 to 500.....	2	3.9	325	50.6
101 to 500.....	15	9.7	4,714	30.9					
501 to 1,000.....	5	3.2	3,917	25.7	LEAD AND ZINC.....	15	100.0	101	100.0
Over 1,000.....	4	2.6	5,296	34.7	No wage earners.....	2	13.3		
					1 to 5.....	6	40.0	11	10.9
COPPER.....	75	100.0	14,237	100.0	6 to 20.....	7	46.7	90	89.1
No wage earners.....	4	5.3							
1 to 5.....	23	30.7	62	0.4					
6 to 20.....	12	16.0	125	0.9					
21 to 50.....	13	17.3	388	2.7					
51 to 100.....	2	2.7	167	1.2					
101 to 500.....	12	16.0	4,282	30.1					
501 to 1,000.....	5	6.7	3,917	27.5					
Over 1,000.....	4	5.3	5,296	37.2					

TABLE 5.—NUMBER OF PRODUCING ENTERPRISES AND AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR SELECTED INDUSTRIES: 1919.

INDUSTRY.	TOTAL.		NUMBER WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—							
	Enterprises.	Wage earners.	36 to 43.		44 to 53.		54 to 62.		63 to 71.	
			Enterprises.	Wage earners.	Enterprises.	Wage earners.	Enterprises.	Wage earners.	Enterprises.	Wage earners.
All industries.....	139	15,268	1	107	51	6,981	86	8,178	1	2
Copper.....	71	14,237			32	6,787	39	7,450		
Gold and silver, lode mines.....	43	642			5	27	37	613	1	2
Lead and zinc.....	13	101			6	45	7	56		
All other industries.....	12	288	1	107	8	122	3	59		

1 Exclusive of 16 enterprises employing no wage earners in industries as follows: Copper, 4; gold and silver, lode mines, 8; lead and zinc, 2; limestone, 2.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1919.

[The month of maximum employment for each industry is indicated by bold-faced figures and that of minimum employment by italic figures.]

INDUSTRY.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
All industries.....	16,066	19,702	16,841	14,073	<i>13,513</i>	14,010	14,159	15,258	16,497	16,964	17,320	17,295	17,160	68.6
Producing enterprises.....	15,268	19,065	16,273	13,358	<i>12,808</i>	13,199	13,280	14,366	15,588	16,036	16,441	16,484	16,318	67.2
Copper.....	14,237	18,079	15,347	12,406	<i>11,840</i>	12,200	12,322	13,337	14,610	14,925	15,294	15,241	15,241	65.5
Gold and silver, lode mines.....	642	607	580	579	581	628	655	710	589	658	739	710	668	78.3
Lead and zinc.....	101	152	111	115	127	98	85	82	88	89	84	90	93	53.9
Granite.....	58	98	96	112	112	80	28	26	26	28	28	25	36	23.2
Limestone.....	45	78	54	51	32	42	36	41	42	47	44	45	23	35.9
All other industries.....	185	51	85	95	116	151	154	170	235	291	303	317	252	16.1
Nonproducing enterprises.....	798	637	568	715	705	811	879	892	909	928	879	811	842	61.2

TABLE 7.—DETAILED STATISTICS FOR MINING INDUSTRIES: 1919.

	Aggregate.	PRODUCING ENTERPRISES.							Nonproducing enterprises. ¹
		Total.	Copper.	Gold and silver, lode mines.	Limestone.	Granite.	Lead and zinc.	All other. ²	
Number of enterprises.....	250	155	75	51	4	3	15	7	95
Number of mines and quarries.....	268	172	89	51	4	5	16	7	96
Capital.....	\$432,634,662	\$402,419,671	\$387,759,328	\$12,936,527	\$108,810	\$62,400	\$1,011,764	\$540,842	\$30,214,991
Principal expenses:									
Salaries and wages—									
Officers.....	\$522,506	\$463,263	\$418,654	\$33,159	—	\$3,000	\$6,950	\$1,500	\$50,333
Superintendents and managers.....	\$1,262,241	\$1,094,179	\$989,648	\$62,452	\$6,000	—	\$22,091	\$13,088	\$163,082
Technical employees.....	\$923,657	\$808,383	\$881,282	\$21,741	—	—	—	\$5,360	\$16,274
Clerks, etc.....	\$1,324,473	\$1,293,504	\$1,249,797	\$33,791	\$2,200	—	\$2,398	\$5,318	\$30,969
Wage earners.....	\$27,420,985	\$26,193,312	\$24,855,574	\$984,828	\$41,941	\$75,894	\$114,651	\$120,424	\$1,227,673
Supplies and materials.....	\$15,758,176	\$14,632,835	\$13,454,473	\$1,018,012	\$16,090	\$14,624	\$89,344	\$40,292	\$1,125,341
Cost of ore purchased.....	\$1,528,056	\$1,528,056	\$1,528,056	—	—	—	—	—	—
Fuel.....	\$4,293,533	\$4,132,257	\$4,034,605	\$64,091	\$1,152	\$9,284	\$10,896	\$12,229	\$101,276
Power.....	\$1,340,232	\$1,245,268	\$1,161,670	\$74,388	\$7,310	\$1,900	—	—	\$94,964
Royalties and rents.....	\$440,621	\$438,926	\$383,213	\$50,297	—	\$2,480	\$2,472	\$464	\$1,095
Taxes.....	\$7,779,826	\$7,752,425	\$7,568,314	\$175,095	—	\$177	\$3,156	\$5,661	\$27,401
Contract work.....	\$966,693	\$746,783	\$592,123	\$366,813	\$70,357	—	\$17,490	—	\$219,820
Expenditures for development (included in the above items).....	\$10,312,108	\$7,233,390	\$6,393,094	\$659,105	\$47,580	—	\$101,006	\$32,605	\$3,078,718
Value of products.....	\$88,478,111	\$88,478,111	\$84,217,141	\$3,523,447	\$153,211	\$128,777	\$127,843	\$327,692	—
Persons engaged in industry.....	17,783	16,831	15,634	754	48	61	120	205	955
Proprietors and firm members (total).....	110	105	37	50	1	—	—	4	2
Number performing manual labor.....	71	68	22	38	—	—	—	—	3
Salaries officers.....	134	94	76	11	—	3	—	—	40
Superintendents and managers.....	364	300	264	21	1	—	—	—	64
Technical employees.....	406	393	383	7	—	—	—	—	13
Clerks, etc.....	703	671	637	23	1	—	—	—	32
Wage earners (average number).....	16,066	15,268	14,237	642	45	58	101	185	798
Wage earners by occupation (Dec. 15):									
Above ground (total).....	7,653	7,231	6,702	108	28	82	34	187	422
Below ground (total).....	10,564	9,801	9,028	544	—	—	127	102	763
Foremen, shift bosses, etc.—									
Above ground.....	286	261	215	34	2	4	2	4	25
Below ground.....	379	330	297	22	—	—	9	2	49
Enginemen, hoistmen, electricians, mechanics, etc.—									
Above ground.....	2,439	2,251	2,158	51	2	10	12	18	188
Below ground.....	582	542	514	27	—	—	1	—	40
Miners, quarrymen, and drillmen, including their helpers—									
Above ground.....	909	880	806	24	16	18	3	13	20
Below ground.....	3,948	3,532	3,151	264	—	—	45	72	416
Timbermen, trackmen, and men engaged in hauling, tramming, etc.—									
Above ground.....	258	219	201	8	—	10	—	—	39
Below ground.....	2,603	2,559	2,434	92	—	—	25	8	44
Muckers, loaders, laborers, and others not classified—									
Above ground.....	2,234	2,093	1,864	41	8	40	7	133	141
Below ground.....	3,052	2,838	2,632	139	—	—	47	20	214
Wage earners employed in mills and beneficiating plants—									
Above ground.....	1,527	1,527	1,458	40	—	—	10	10	—
Number of females included in wage earners reported above—									
Above ground.....	17	8	8	5	—	—	—	—	9
Mineral land operated.....acres..	106,932	70,431	50,136	10,175	688	232	4,575	4,625	36,501
Land controlled, total.....acres..	124,599	87,759	67,414	10,175	688	232	4,575	4,625	36,840
Mineral land owned.....	91,694	56,962	41,600	7,928	688	83	2,383	4,380	34,732
Mineral land leased.....	15,238	13,460	8,636	2,247	—	—	2,192	245	1,769
Timber and other lands owned and leased.....	17,667	17,328	17,278	—	—	50	—	—	339
Power used: Aggregate horsepower.....	175,370	166,041	158,614	5,107	255	417	634	1,064	9,279
Prime movers (horsepower, total).....	144,636	138,529	133,762	2,762	55	252	634	1,064	6,107
Steam engines—									
Number.....	277	262	233	17	—	3	—	—	15
Horsepower.....	53,800	52,634	50,778	1,601	—	40	65	150	1,166
Steam turbines—									
Number.....	21	21	21	—	—	—	—	—	—
Horsepower.....	73,037	73,037	73,037	—	—	—	—	—	—
Internal-combustion engines—									
Number.....	297	166	64	61	2	6	18	15	131
Horsepower.....	17,799	12,858	9,947	1,161	55	212	569	914	4,941
Purchased power (horsepower, total).....	30,734	27,562	24,852	2,345	200	165	—	—	3,172
Electric motors operated by purchased current—									
Number.....	690	632	528	98	3	3	—	—	58
Horsepower.....	29,719	26,547	23,837	2,345	200	165	—	—	3,172
Other equipment operated by purchased power—									
Horsepower.....	1,015	1,015	1,015	—	—	—	—	—	—
Electric motors run by current generated by enterprise using—									
Number.....	1,165	1,155	1,139	5	—	—	—	—	10
Horsepower.....	77,718	77,545	77,126	32	—	—	—	11	173
Fuel used:									
Coal, bituminous.....tons, 2,000 pounds..	85,230	84,938	83,429	297	—	—	—	—	292
Coke.....tons, 2,000 pounds..	174	174	—	—	—	—	2	1,210	—
Wood.....cords.....	2,551	1,602	20	1,508	—	—	—	—	—
Fuel oils.....barrels.....	1,301,290	1,279,173	1,258,708	10,687	236	6,096	38	3,361	949
Gasoline and other volatile oils.....barrels.....	13,735	6,706	2,473	2,763	17	251	85	3,220	22,117

¹ Includes enterprises as follows: Asbestos, 2; gold, placer mines, 1; gypsum, 1; manganese, 1; sandstone, 2.
² Includes enterprises as follows: Gold, silver, copper, lead, or zinc, 94; molybdenum, 1.