

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

KANSAS, MISSOURI, OKLAHOMA

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CONTENTS.	KANSAS.	MISSOURI.	OKLAHOMA.
	<i>Page.</i>	<i>Page.</i>	<i>Page.</i>
Explanation of terms.....	2	2	2
Comparative summary, producing enterprises: 1919 and 1909.....	5	10	14
Principal industries, producing enterprises, ranked by value of products: 1919.....	5	10	14
Character of organization, for selected industries, producing enterprises: 1919.....	5	10	14
Size of producing enterprises, by average number of wage earners, for selected industries: 1919.....	6	11	15
Number of producing enterprises and average number of wage earners, by prevailing hours of labor per week, for selected industries: 1919.....	6	11	15
Wage earners, by months, for selected industries: 1919.....	6	11	15
Detailed statistics for mining industries: 1919.....	7	12	16



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.

KANSAS.

Kansas, which ranks thirteenth among the states in size (land area 81,774 square miles) and twenty-fourth in population (1,769,257 in 1920), ranked eleventh in value of mineral products for 1919. The state ranked twelfth in the total number of persons engaged in the mining industries and fourteenth in the average number of wage earners employed.

The total amount received by operators of all mines, quarries, and wells in Kansas in 1919 was \$90,338,204, an increase of 382.5 per cent compared with the corresponding amount reported at the census of 1909. The value of products reported for 1919 includes duplications to the amount of \$298,353, the value of natural gas purchased by some producers from others and used as material or resold, and the value of lead and zinc ore sold by some operators and again included in the value of products by others who concentrated the ore. Deducting this amount leaves \$90,039,851, the net value of products for 1919, which was an increase of 391.2 per cent over the net value for 1909. The value of products reported for 1919 includes, in addition to the value of the minerals produced, a small amount received for power sold and for work or miscellaneous services for other enterprises. The increase in value of products, also increases in capital, wages, cost of supplies and materials and fuel and power, as shown in Table 1, are largely due to general price increases during the census interval, but, nevertheless, show growth in the mining industries. Progress is also indicated by the increase in the number of producing enterprises and wells operated and average number of wage earners. The decrease in the number of individual mines and quarries operated and the increase in the number of wells show that the general growth of mineral industries in Kansas was due to expansion of the petroleum and natural-gas industry, which offset decreases in other industries.

The mining industries reported in Kansas in 1919, classified according to principal products and listed in order of value of products, were petroleum and natural gas, bituminous coal, lead and zinc, limestone, gypsum, abrasive materials (pumice), and clay. One of the most important mining industries in Kansas was the production of salt. The statistics for this industry are included in the census of manufactures. The industries for which statistics can be shown without disclosure of individual operations are ranked by value of products in Table 2.

The leading mineral industry in Kansas was the production of petroleum and natural gas. The statistics presented for this industry include figures on operation of plants engaged in the extraction of

gasoline from natural gas, whether such plants were connected with well operations or not. Out of a total of 814 enterprises, 613 were reported in the petroleum and natural-gas industry. These enterprises employed 39.1 per cent of the total number of wage earners and contributed products valued at \$68,515,158, or 75.8 per cent of the total. Kansas ranked fifth in petroleum and natural-gas output in 1919. Production was obtained from some 50 pools or local fields distributed over about 5,000 square miles of territory in 27 southeastern counties. This region is part of the Mid-Continent Oil Field which extends from Kansas through Oklahoma into northern Texas and Louisiana.

The industry second in importance in Kansas in 1919, on the basis of value of products but first as measured by average number of wage earners, was the mining of bituminous coal. This industry, comprising about one-sixth of all mining enterprises in the state, employed 50.1 per cent of the total number of wage earners and reported products valued at \$15,748,535, or 17.4 per cent of the total value of products for the state. Production of coal was reported from six eastern and southeastern counties of which Cherokee and Crawford were the most important.

The mining of lead and zinc was third in importance in the state. It was confined to Cherokee County, the output of which placed Kansas fifth among the states as a producer of lead and zinc ores. The 30 enterprises in this industry employed 7.1 per cent of the total number of wage earners and reported products valued at \$4,872,968, or 5.4 per cent of the total value for the state.

In addition to the operations of productive mines, quarries, and wells, work done for the purpose of development of unproductive property was reported by 10 enterprises in the petroleum and natural-gas industry, 2 in lead and zinc mining, and 1 in coal mining. Such activities amounted to only a very small part of the aggregate mining operations in the state.

Mining enterprises in Kansas in 1919 are classified in Table 3 according to character of the operating organization. This table shows that for all industries combined corporations were in the majority. They controlled 53.1 per cent of the number of enterprises, employed 87.5 per cent of the wage earners, and reported 89.5 per cent of the total value of products. In the three leading industries a similar preponderance of corporations over other forms of organization is shown.

The relatively large number of small enterprises, as measured by the average number of wage earners employed, is shown in Table 4. Of the total number of

MINES AND QUARRIES—KANSAS.

mining enterprises in Kansas, 16.3 per cent had no wage earners and 80 per cent reported fewer than 101 wage earners each and these employed 37.5 per cent of the total number of wage earners. On the other hand, only 3.6 per cent of the total number of enterprises had more than 100 wage earners each and these enterprises employed 62.5 per cent of the total number of wage earners. The larger enterprises were in the coal and petroleum and natural-gas industries, except that one was reported in the lead and zinc industry and one in the limestone industry.

In Table 5 the mining enterprises are classified according to prevailing hours of labor. The largest group of enterprises is shown in the class where the hours of labor were 44 to 53 per week. This class employed 57.5 per cent of the total number of wage earners. A considerable number of enterprises were in the class for which the hours of labor were 54 to 62 per week. Practically all the enterprises and wage

earners in the coal-mining industry and a large majority of the enterprises and wage earners in the lead and zinc mining industry were in the class working 44 to 53 hours per week. The 8-hour day and 6-day week prevailed in both industries, but a 7-day week in the lead and zinc industry was reported by several important enterprises. In the petroleum and natural-gas industry longer hours were the rule.

The statistics for wage earners presented in Table 6, showing changes in the number employed month by month, reflect conditions prevailing in the industries during the census year. The extreme minimum for the coal industry shown in the month of November is due to the great strike, and the extent of unemployment in that industry was so great as to be reflected in 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 disclosure of individual operations.

MINES AND QUARRIES—KANSAS.

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.....	814	643	26.6	Capital.....	\$255,935,807	\$41,797,329	512.3
Number of mines and quarries.....	238	582	-59.1	Principal expenses:			
Number of petroleum and natural-gas wells.....	12,090	3,402	273.0	Salaries.....	3,299,894	688,432	379.3
Number of natural-gas gasoline plants.....	11			Wages.....	21,948,799	9,636,350	127.8
Persons engaged.....	18,089	16,103	16.1	Contract work.....	3,997,644	395,947	909.6
Proprietors and firm members, total.....	807	1,074	-24.9	Supplies and materials ²	33,395,983	2,038,025	1,538.6
Number performing manual labor in or about the mines, quarries, and wells.....	123	575	-78.6	Fuel and power.....	4,305,575	267,964	1,508.8
Salaried employees.....	1,746	686	154.5	Royalties and rents.....	10,712,223	1,665,839	543.1
Wage earners (average number).....	16,136	14,343	12.5	Taxes.....	2,273,748	147,570	1,440.8
Power used (horsepower).....	133,084	66,943	190.1	Value of products.....	90,338,204	18,722,634	382.5

¹ A minus sign (-) denotes decrease.

² Includes cost of ore and natural gas purchased as material or for resale.

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.....	814	16,136	100.0	\$90,338,204	100.0	Lead and zinc.....	30	1,141	7.1	\$4,872,968	5.4
Petroleum and natural gas.....	613	6,305	39.1	68,515,158	75.8	Limestone.....	35	484	3.0	835,147	0.9
Coal, bituminous.....	129	8,084	50.1	15,748,535	17.4	All other industries ¹	7	122	0.8	360,396	0.4

¹ Includes enterprises in industries as follows: Abrasive materials, 3; clay, 1; gypsum, 3.

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.....	814	16,136	\$90,338,204	\$110,981	100.0	100.0	100.0
Corporation.....	432	14,127	80,814,042	187,072	53.1	87.5	89.5
Individual.....	143	922	3,128,553	21,878	17.6	5.7	3.5
Firm.....	212	915	5,885,558	26,347	26.0	5.7	6.2
Other.....	27	172	809,151	29,699	3.3	1.1	0.9
PETROLEUM AND NATURAL GAS.....	613	6,305	68,515,158	111,770	100.0	100.0	100.0
Corporation.....	334	5,730	61,600,096	184,434	54.5	91.0	89.0
Individual.....	91	100	1,069,900	18,361	14.8	2.5	2.4
Firm.....	165	348	4,568,014	27,690	26.9	5.5	6.7
Other.....	23	61	675,348	29,363	3.8	1.0	1.0
COAL, BITUMINOUS.....	129	8,084	15,748,535	122,082	100.0	100.0	100.0
Corporation.....	93	6,925	13,643,327	216,561	48.8	85.7	86.0
Individual.....	30	652	1,250,429	41,031	23.3	8.1	7.9
Firm.....	32	396	720,976	22,531	24.8	4.9	4.6
Other.....	4	111	193,803	33,451	3.1	1.4	0.8
LEAD AND ZINC.....	30	1,141	4,872,968	162,432	100.0	100.0	100.0
Corporation.....	25	1,111	4,841,010	103,640	83.3	97.4	99.8
Firm.....	5	30	31,958	6,392	16.7	2.6	0.7
LIMESTONE.....	35	484	835,147	23,861	100.0	100.0	100.0
Corporation.....	5	240	412,742	82,548	14.3	49.6	49.4
Individual.....	18	97	167,470	8,748	51.4	20.0	13.9
Firm.....	12	147	264,935	22,078	34.3	30.4	31.7

¹ Includes 2 individuals.

MINES AND QUARRIES—KANSAS.

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.....	814	100.0	16,136	100.0	PETROLEUM AND NATURAL GAS...	613	100.0	6,305	100.0
No wage earners.....	133	16.3			No wage earners.....	132	21.5		
1 to 5.....	424	52.1	733	4.6	1 to 5.....	381	62.2	624	9.9
6 to 20.....	144	17.7	1,555	9.6	6 to 20.....	75	12.2	810	12.9
21 to 50.....	57	7.0	1,874	11.6	21 to 50.....	15	2.4	485	7.7
51 to 100.....	26	3.2	1,885	11.7	51 to 100.....	3	0.5	194	3.1
101 to 500.....	26	3.2	4,719	29.2	101 to 500.....	6	1.0	1,292	20.5
501 to 1,000.....	2	0.2	1,317	8.2	Over 1,000.....	1	0.2	2,804	45.9
Over 1,000.....	2	0.2	4,048	25.1					
COAL, BITUMINOUS.....	129	100.0	8,084	100.0	LEAD AND ZINC.....	30	100.0	1,141	100.0
No wage earners.....	1	0.8			1 to 5.....	5	16.7	14	1.2
1 to 5.....	10	14.7	63	0.8	6 to 20.....	8	26.7	101	8.9
6 to 20.....	46	35.7	479	5.9	21 to 50.....	8	26.7	261	22.9
21 to 50.....	28	21.7	933	11.6	51 to 100.....	8	26.7	530	46.5
51 to 100.....	14	10.9	1,089	13.5	101 to 500.....	1	3.3	235	20.6
101 to 500.....	18	14.0	3,039	37.6					
501 to 1,000.....	2	1.5	1,317	16.3	LIMESTONE.....	35	100.0	484	100.0
Over 1,000.....	1	0.8	1,164	14.3	1 to 5.....	17	48.6	31	6.4
					6 to 20.....	11	31.4	110	22.7
					21 to 50.....	6	17.1	190	39.3
					101 to 500.....	1	2.9	163	31.6

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—											
	Enter-prises.	Wage earners.	35 and under.		36 to 43.		44 to 53.		54 to 62.		63 to 71.		72 to 81.	
			Enter-prises.	Wage earners.	Enter-prises.	Wage earners.	Enter-prises.	Wage earners.	Enter-prises.	Wage earners.	Enter-prises.	Wage earners.	Enter-prises.	Wage earners.
All industries.....	1,681	16,136	56	88	26	60	317	9,276	185	2,508	47	680	50	3,524
Coal, bituminous.....	128	8,084	4	29	3	16	121	8,089						
Petroleum and natural gas.....	481	6,305	52	59	22	43	148	376	183	1,624	47	680	40	3,523
Lead and zinc.....	30	1,141					25	718	4	422			1	1
Limestone.....	35	484			1	1	22	133	12	350				
All other.....	7	122					1	10	6	112				

¹ Exclusive of 133 enterprises employing no wage earners in industries as follows: Coal, bituminous, 1; petroleum and natural gas, 132.

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.....	16,193	17,476	17,282	17,230	16,871	17,286	17,019	17,260	16,470	16,487	16,490	<i>8,931</i>	15,510	51.1
Producing enterprises.....	16,136	17,448	17,262	17,207	16,851	17,214	16,982	17,191	16,397	16,397	16,415	<i>8,843</i>	15,425	50.7
Coal, bituminous.....	8,084	9,728	9,610	9,583	9,292	9,216	9,151	9,136	7,913	7,818	7,802	<i>522</i>	7,237	5.4
Petroleum and natural gas.....	6,305	6,347	6,196	5,987	5,879	6,159	6,050	6,323	6,591	6,666	6,591	<i>6,452</i>	6,423	88.3
Lead and zinc.....	1,141	850	941	1,080	1,030	1,122	1,028	1,122	1,300	1,277	1,346	<i>1,204</i>	1,323	63.2
Limestone.....	484	416	415	461	532	607	637	506	471	509	536	<i>447</i>	281	44.1
All other industries.....	122	107	100	106	118	110	110	104	113	137	140	<i>158</i>	161	62.1
Nonproducing enterprises.....	57	28	<i>20</i>	32	<i>20</i>	22	22	67	75	82	90	75	88	22.2
Petroleum and natural gas.....	8	2	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	<i>2</i>	3	3	3	3	5	5	40.0
All other industries.....	54	26	18	30	18	20	65	72	79	87	70	83	80	20.7

MINES AND QUARRIES—KANSAS.

7

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

	Aggregate.	PRODUCING ENTERPRISES.						NONPRODUCING ENTERPRISES.		
		Total.	Petroleum and natural gas.	Coal, bituminous.	Lead and zinc.	Limestone.	All other. ²	Total.	Petroleum and natural gas.	All other. ³
Number of enterprises.....	827	814	613	129	30	35	7	13	10	3
Number of mines and quarries.....	241	235		196	30	35	7	3		3
Number of petroleum and natural-gas wells.....	12,090	12,090	12,090							
Number of natural-gas gasoline plants.....	11	11	11							
Capital.....	\$257,222,997	\$255,935,807	\$237,711,466	\$12,285,452	\$4,465,307	\$768,585	\$704,997	\$1,287,190	\$245,028	\$1,042,162
Principal expenses:										
Salaries and wages--										
Officers.....	\$899,604	\$853,604	\$548,875	\$236,115	\$50,802	\$11,230	\$6,882	\$15,700		\$15,700
Superintendents and managers.....	\$1,010,234	\$1,001,606	\$596,598	\$284,360	\$90,240	\$20,790	\$9,594	\$3,628		\$6,300
Technical employees.....	\$283,224	\$280,374	\$247,736	\$23,346	\$7,792	\$1,500		\$2,850		\$2,850
Clerks, etc.....	\$1,171,255	\$1,164,010	\$805,539	\$280,698	\$32,069	\$31,293	\$14,441	\$7,245		\$1,025
Wage earners.....	\$22,021,050	\$21,948,799	\$9,615,375	\$9,049,156	\$1,760,200	\$509,783	\$123,285	\$72,857		\$8,783
Supplies and materials.....	\$33,234,583	\$33,097,630	\$30,046,473	\$1,906,063	\$977,212	\$128,655	\$39,227	\$136,053		\$28,208
Cost of ore purchased and natural gas purchased as material and resold.....	\$298,353	\$298,353	\$287,725		\$10,628					
Fuel.....	\$4,075,132	\$4,067,088	\$3,269,151	\$470,920	\$39,822	\$18,775		\$8,044		\$2,375
Power.....	\$273,333	\$273,333	\$81,983	\$55,520	\$107,797	\$8,284	\$4,903	\$34,846		\$503
Royalties and rents.....	\$10,738,045	\$10,712,223	\$9,547,508	\$409,674	\$97,874	\$20,034	\$37,073	\$26,722		\$2,376
Taxes.....	\$2,274,285	\$2,273,748	\$1,943,568	\$295,463	\$24,716	\$6,009	\$3,902	\$537		\$98
Contract work.....	\$4,063,020	\$3,997,644	\$3,887,822	\$9,353	\$95,092	\$19,130	\$16,247	\$65,376		\$64,940
Expenditures for development (included in the above items).....	\$23,722,380	\$23,448,955	\$23,127,585	\$90,748	\$221,372	\$3,250		\$273,425		\$104,472
Value of products.....	\$90,338,204	\$90,338,204	\$68,515,158	\$15,748,535	\$4,872,968	\$835,147	\$306,396			\$168,953
Persons engaged in industry.....	18,777	18,680	8,131	8,622	1,294	563	139	88	20	68
Proprietors and firm members (total).....	823	807	630	111	10	46	2	16	14	2
Number performing manual labor.....	124	123	32	78	1	12		1	1	
Salariat officers.....	290	280	187	65	27	4	3	4		4
Superintendents and managers.....	418	412	259	113	27	9	4	4	2	2
Technical employees.....	152	151	126	20	4	1		1		1
Clerks, etc.....	993	997	615	220	25	20	8	6	1	5
Wage earners (average number).....	16,193	16,136	6,305	8,084	1,141	484	122	57	3	54
Wage earners by occupation (Dec. 15):										
Above ground (total).....	9,262	9,205	6,502	1,492	581	507	123	57	7	50
Below ground (total).....	8,706	8,677		7,761	866		50	20		20
Foremen, shift bosses, etc.--										
Above ground.....	140	138		106	20	10	2	2		2
Below ground.....	130	127		101	24		3	3		3
Engineers, hoistmen, electricians, mechanics, etc.--										
Above ground.....	4,318	4,299	3,544	522	186	44	3	19	7	12
Below ground.....	82	78		72	3		3	4		4
Miners, quarrymen, and drillmen, including their helpers--										
Above ground.....	439	439		204		235				
Below ground.....	6,250	6,246		5,841	389		16	4		4
Timberman, trackmen, and men engaged in hauling, tramping, etc.--										
Above ground.....	172	164		115	12	35	2	8		8
Below ground.....	1,667	1,652		1,413	227		12	15		15
Muckers, loaders, laborers, and others not classified--										
Above ground.....	3,796	3,768	2,058	545	35	183	47	28		28
Below ground.....	577	574		384	223		17	3		3
Wage earners employed in mills and beneficiating plants--										
Above ground.....	397	397			328		69			
Mineral and oil land operated..... acres..	574,290	549,300	468,144	73,559	1,686	1,208	4,708	24,990	2,975	22,015
Land controlled, total..... acres..	590,908	564,411	468,144	88,050	1,686	1,228	4,708	25,502	2,975	22,017
Mineral and oil land owned.....	70,562	69,021	34,727	30,620		672	3,593	941	15	920
Mineral and oil land leased.....	505,280	480,020	433,417	43,880	1,686	530	1,110	24,651	2,960	21,691
Timber and other lands owned and leased.....	14,161	14,161		14,141		20				
Power used: Aggregate horsepower.....	135,531	133,984	95,883	23,434	11,490	2,252	919	1,547	151	1,396
Prime movers (horsepower, total).....	123,104	121,477	91,971	19,334	8,367	1,686	119	627	131	496
Steam engines--										
Number.....	910	903	432	353	45	20	3	7	2	5
Horsepower.....	37,150	36,095	13,346	18,978	3,135	1,046	100	554	58	496
Internal-combustion engines--										
Number.....	3,164	3,160	3,057	36	53	11	3	4	4	
Horsepower.....	84,360	84,287	78,025	356	4,647	640	10	73	73	
Water wheels, turbines, and motors--										
Number.....	7	7			7					
Horsepower.....	585	585			585					
Purchased power (horsepower, total).....	13,427	12,507	3,912	4,100	3,129	566	800	920	20	900
Electric motors operated by purchased current--										
Number.....	516	499	163	233	56	12	35	17	1	16
Horsepower.....	13,327	12,507	3,912	4,100	3,129	566	800	920	20	800
Other equipment operated by purchased power--										
Horsepower.....	100							100		100
Electric motors run by current generated by enterprise using:										
Number.....	310	308	240	37		15	7	2		2
Horsepower.....	8,896	8,886	7,440	1,041		360	45	10		10
Fuel used:										
Coal, bituminous..... tons, 2,000 pounds..	213,528	212,593	5,470	170,066	30,080	5,126	1,161	1,025	125	900
Wood..... cords.....	747	747		67						
Fuel oils..... barrels.....	695,021	694,541	672,021	2	12,138	3,275	7,110	480	480	
Gasoline and other volatile oils..... barrels.....	4,028	3,972	3,269	360		320	23	56	56	
Natural gas..... 1,000 cubic feet.....	8,098,022	8,088,328	7,769,599		318,819			9,694	2,000	7,694

¹ Includes 2 reduction mills operated independently of mines, and 1 operation on dumps or old tailings.

² Includes enterprises as follows: Abrasive materials, 3; clay, 1; gypsum, 3.

³ Includes enterprises as follows: Coal, bituminous, 1; lead and zinc, 2.

MISSOURI.

Missouri, which ranks eighteenth in size among the states (land area 68,727 square miles) and ninth in population (3,404,055 in 1920), ranked twentieth in value of mineral products for 1919. The state ranked seventeenth 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 operators of all mines and quarries in 1919 was \$33,365,694, which was an increase of 5.4 per cent over the corresponding amount for 1909. There are included in the gross receipts for products duplications in the value of lead and zinc ores and concentrates, marketed by some operators and used as material by others who included the value of the purchased material in the value of products reported by them. Deducting these duplications, \$669 for 1919 and \$1,471,553 for 1909, leaves the net values of products \$33,365,025 and \$30,195,972, respectively, or an increase of 10.5 per cent in 1919 as compared with 1909. The value of products reported for 1919 includes \$19,599 received for mineral by-products; \$10,995 for other products not specified; \$1,766 for custom milling; and \$19,820 for power sold and for work or miscellaneous services for other enterprises.

The statistics for 1919 are not wholly comparable with those reported by the census for 1909, for the reason that those for the lead and zinc industry for 1909 include the operation of smelters connected with mining operations. Smelter statistics for 1919 were not collected by the census of mines and quarries. By reason of the difference in the scope of the censuses, the 1909 figures for value of products include approximately \$4,500,000 which have no counterpart in the value of products for 1919. The figures reported in 1909 for other items are affected by indeterminate but probably proportionate amounts. On this account the statistics shown in Table 1, should not be accepted as indicating correctly the change in the mining industries in Missouri. The increase in taxes shown in this table is accounted for by addition of Federal income taxes since 1909.

The mining industries reported for the state of Missouri in 1919, classified according to principal products and listed in order of value of products, were lead and zinc, bituminous coal, limestone, clay, barytes, copper, sandstone, iron ore, marble, granite, pyrite, and abrasive materials. In addition to products indicated by the industry designations, one lead and zinc enterprise produced barytes and two pro-

duced pyrite as a by-product; three barytes enterprises produced lead ore; two limestone enterprises produced marble; one marble enterprise produced limestone; and one coal mine produced sandstone. Industries for which statistics can be shown without disclosure of individual operations are ranked by value of products in Table 2.

The leading mining industry in Missouri in 1919 was the production of lead and zinc. The statistics for this industry, here presented, include all operations connected with mining of crude ore and the treatment to which the ore is subjected at the mines, including the operation of hand jigs and reduction mills, and also the operations on dumps and old tailings and in custom or merchant mills whether connected with mines or not. Smelter operations are not included. Furthermore, the statistics are based on the reports of operators many of whom are sublessees and of whom there are sometimes a considerable number on a single mining property. The statistics, therefore, will differ as to number of enterprises and mines, value of products, and size and character of operating organizations from statistics based on reports from fee owners or primary lessees. As reported to the census, the lead and zinc mining industry in 1919 included 93 enterprises, reported 32.3 per cent of the total number of wage earners and \$15,879,177 as the gross value of products, or 47.6 per cent of the total value of products for the state. This value of products is based on the sales value of mine and mill products and not on value of the lead and zinc metal or oxide obtained from them. Missouri ranked second in the United States in the lead and zinc mining industry. Production was reported from Barry, Greene, Jasper, Lawrence, and Newton Counties in southwestern Missouri, and Franklin, Jefferson, and St. Francois in southeastern Missouri.

The industry second in importance on the basis of value of products, but first on basis of average number of wage earners, was the mining of bituminous coal. This industry embraced 179 out of a total of 468 enterprises, employed 49 per cent of the average number of wage earners, and reported products valued at \$12,077,845, or 36.2 per cent of the total value of products of the state. Coal production was reported from 27 counties in central, northern, and western parts of the state.

The only other mining industries in Missouri with products valued at over a million dollars in 1919 were limestone quarrying and clay mining. These two in-

dustries employed respectively 7.9 and 4.2 per cent of the average number of wage earners, and contributed products valued at \$2,355,736 and \$1,420,585.

Although small as compared with other industries in the state, the production of barytes was important and gave Missouri second rank in the United States in the production of this mineral. Seven counties reported, but the bulk of the production came from Washington County.

The character of organizations conducting mining enterprises in Missouri in 1919 is brought out in Table 3, which shows that somewhat less than half of the enterprises were conducted by corporations. Corporations, nevertheless, employed 86.8 per cent of the total number of wage earners and contributed 90.3 per cent of the total value of products. The table shows also that for each of the industries separately presented, except barytes, the corporations controlled as to wage earners employed and value of products reported, although they did not constitute a majority of the enterprises in every industry. The barytes industry was largely made up of small operations by individuals or firms; however, the largest share of wage earners and value of products of the industry is credited to corporations.

The relatively large number of small enterprises, as measured by the average number of wage earners employed, is shown in Table 4. Of the total number of mining enterprises employing wage earners, 89.8 per cent reported fewer than 101 wage earners each

and employed 46.5 per cent of the total number. On the other hand, only 24 enterprises, or 5.1 per cent of the total number, had more than 100 wage earners each and these enterprises employed more than half of the wage earners reported. In Table 4 all these larger enterprises are shown in the coal-mining and lead and zinc mining industries except one in the limestone-quarrying industry.

Table 5 shows that in a majority of enterprises, employing wage earners, and in 84.5 per cent of the total number of wage earners the hours of labor in the mining industries in Missouri in 1919 were 44 to 53 per week. In the principal industries, coal mining and lead and zinc mining, the 8-hour day and 6-day week prevailed. In the latter industry, however, some of the enterprises reported longer hours for wage earners employed in reduction mills and otherwise above ground.

The statistics for wage earners presented in Table 6, showing changes in the number employed month by month, reflect conditions prevailing in the industries during the census year. The minimum shown for the coal industry in the month of November due to the great coal strike is extremely low, so much so that it makes an abnormal minimum in November 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 disclosure of individual operations.

MINES AND QUARRIES—MISSOURI.

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.....	468	1,021	-54.2	Capital.....	\$47,026,850	\$60,540,081	-20.8
Number of mines and quarries.....	494	1,224	-59.6	Principal expenses:			
Number of petroleum and natural-gas wells.....		39		Salaries.....	1,863,624	1,274,020	46.2
Persons engaged.....	16,358	26,933	-39.3	Wages.....	16,777,353	14,393,670	16.6
Proprietors and firm members, total.....	497	1,783	-72.1	Contract work.....	416,843	182,084	156.6
Number performing manual labor in or about the mines, quarries, and wells.....	219	1,003	-79.4	Supplies and materials ²	4,784,748	6,201,895	-22.9
Salaried employees.....	1,004	1,730	-42.0	Fuel and power.....	2,034,413	2,220,657	-8.4
Wage earners (average number).....	14,857	23,420	-36.6	Royalties and rents.....	780,004	1,064,092	-60.1
Power used (horsepower).....	100,160	109,672	-8.7	Taxes.....	2,071,467	158,086	1,210.3
				Value of products.....	33,365,694	31,667,525	5.4

¹ A minus sign (-) denotes decrease.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.....	468	14,857	100.0	\$33,365,694	100.0	Limestone.....	70	1,171	7.0	\$2,355,736	7.1
Lead and zinc.....	93	4,793	32.3	15,879,177	47.6	Clay.....	41	622	4.2	1,420,585	4.3
Coal, bituminous.....	179	7,285	49.0	12,077,845	36.2	Barytes.....	66	480	3.2	527,817	1.6
						All other industries ¹	10	506	3.4	1,104,534	3.3

¹ Includes enterprises in industries as follows: Abrasive materials, 2; copper, 1; granite, 2; iron ore, 8; marble, 1; pyrite, 1; sandstone, 4.

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.....	468	14,857	\$33,365,694	\$71,204	100.0	100.0	100.0
Corporation.....	216	12,897	30,145,891	139,564	46.2	86.8	90.3
Individual.....	133	990	1,528,676	11,478	28.4	6.7	4.6
Firm.....	119	970	1,693,227	14,220	25.4	6.5	5.1
LEAD AND ZINC.....	93	4,793	15,879,177	170,744	100.0	100.0	100.0
Corporation.....	36	4,505	15,153,827	421,070	38.7	94.0	95.6
Individual.....	9	59	102,967	11,441	9.7	1.2	0.6
Firm.....	48	229	617,383	12,892	51.6	4.8	3.9
COAL, BITUMINOUS.....	179	7,285	12,077,845	67,474	100.0	100.0	100.0
Corporation.....	92	6,399	10,756,623	116,910	51.4	87.8	89.1
Individual.....	43	361	517,831	12,043	24.0	5.0	4.3
Firm.....	44	525	803,491	18,261	24.6	7.2	6.7
LIMESTONE.....	70	1,171	2,355,736	33,683	100.0	100.0	100.0
Corporation.....	39	877	1,921,761	49,276	55.7	74.9	81.6
Individual.....	23	205	307,643	13,371	32.9	17.5	13.1
Firm.....	8	89	126,432	15,804	11.4	7.6	5.4
CLAY.....	41	622	1,420,585	34,648	100.0	100.0	100.0
Corporation.....	20	421	965,618	48,281	48.8	67.7	68.0
Individual.....	18	173	406,016	22,586	43.0	27.8	28.6
Firm.....	3	28	48,951	16,317	7.3	4.5	3.4
BARYTES.....	66	480	527,817	7,907	100.0	100.0	100.0
Corporation.....	12	196	242,496	20,208	18.2	40.8	45.9
Individual.....	40	192	192,210	4,806	60.6	40.0	36.4
Firm.....	14	92	93,102	6,680	21.2	19.2	17.6

¹ Includes 1 other form of organization.

MINES AND QUARRIES—MISSOURI.

11

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.....	408	100.0	14,857	100.0	LIMESTONE.....	70	100.0	1,171	100.0
No wage earners.....	24	5.1	405	2.7	No wage earners.....	1	1.4	60	5.1
1 to 5.....	156	38.3	1,798	12.1	1 to 5.....	20	28.6	353	30.1
6 to 20.....	162	39.7	2,397	16.1	6 to 20.....	29	41.4	491	41.9
21 to 50.....	78	19.1	3,321	22.4	21 to 50.....	17	24.3	124	10.6
51 to 100.....	34	8.3	3,917	26.4	51 to 100.....	2	2.9	143	12.2
101 to 500.....	20	4.9	1,344	9.0	101 to 500.....	1	1.4		
501 to 1,000.....	2	0.4	2,080	14.0					
Over 1,000.....	2	0.4			CLAY.....	41	100.0	622	100.0
COAL, BITUMINOUS.....	170	100.0	7,285	100.0	1 to 5.....	16	39.0	47	7.6
No wage earners.....	1	0.6	145	2.0	6 to 20.....	16	39.0	220	35.4
1 to 5.....	44	25.9	624	8.6	21 to 50.....	7	17.1	222	35.7
6 to 20.....	56	32.9	1,258	17.3	51 to 100.....	2	4.9	133	21.4
21 to 50.....	40	23.5	1,447	19.9					
51 to 100.....	21	12.4	3,135	43.0	BARYTES.....	66	100.0	430	100.0
101 to 500.....	16	9.4	676	9.3	No wage earners.....	1	1.5	36	17.9
501 to 1,000.....	1	0.6			1 to 5.....	39	59.1	267	58.6
Over 1,000.....	1	0.6			6 to 20.....	24	36.4	27	5.6
LEAD AND ZINC.....	93	100.0	4,793	100.0	21 to 50.....	1	1.5	100	20.8
No wage earners.....	10	10.8	55	1.2	51 to 100.....	1	1.5		
1 to 5.....	34	36.6	270	5.6					
6 to 20.....	22	23.7	265	5.5					
21 to 50.....	9	9.7	216	4.5					
51 to 100.....	3	3.2	630	13.3					
101 to 500.....	3	3.2	668	13.9					
501 to 1,000.....	1	1.1	2,680	55.9					
Over 1,000.....	2	2.1							

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—											
	Enter-prises.	Wage earners.	35 and under.		36 to 43.		44 to 53.		54 to 62.		63 to 71.		72 to 84.	
			Enter-prises.	Wage earners.	Enter-prises.	Wage earners.	Enter-prises.	Wage earners.	Enter-prises.	Wage earners.	Enter-prises.	Wage earners.	Enter-prises.	Wage earners.
All Industries.....	1,444	14,857	43	221	22	305	275	12,501	102	1,622	1	143	1	5
Coal, bituminous.....	178	7,285	0	00	18	253	142	6,745	9	217				
Lead and zinc.....	74	4,793					65	4,734	9	59				
Limestone.....	69	1,171					22	330	46	698	1	143		
Clay.....	41	622	1	8			22	393	17	216			1	5
Barytes.....	66	430	33	144	3	45	18	99	11	192				
All other industries.....	17	506			1	7	0	259	10	240				

1 Exclusive of 24 enterprises employing no wage earners in industries as follows: Barytes, 1; coal, bituminous, 1; granite, 1; iron ore, 1; lead and zinc, 19; limestone, 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.....	14,857	17,319	16,470	15,406	15,014	14,501	14,401	14,871	14,907	15,672	15,729	<i>8,966</i>	15,020	51.8
Coal, bituminous.....	7,285	9,137	8,971	7,982	7,534	7,141	7,162	7,667	7,240	7,631	7,873	<i>1,387</i>	7,695	15.2
Lead and zinc.....	4,793	5,748	5,233	4,971	4,820	4,586	4,475	4,402	4,684	4,820	4,687	<i>4,548</i>	4,544	76.6
Limestone.....	1,171	912	<i>888</i>	920	1,071	1,182	1,211	1,305	1,404	1,414	1,377	<i>1,287</i>	1,137	58.4
Clay.....	622	533	<i>536</i>	558	627	590	640	601	654	684	677	<i>658</i>	656	78.4
Barytes.....	430	304	<i>304</i>	441	434	471	468	484	480	577	575	<i>513</i>	515	63.3
All other industries.....	506	545	510	528	519	531	445	412	436	537	580	<i>587</i>	473	72.7

MINES AND QUARRIES—MISSOURI.

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

	Total.	PRODUCING ENTERPRISES.					
		Lead and zinc. ¹	Coal, bituminous.	Limestone.	Clay.	Barytes.	All other. ²
Number of enterprises.....	408	93	179	70	41	00	10
Number of mines and quarries.....	494	90	193	71	42	70	10
Capital.....	\$47,926,850	\$26,758,369	\$11,788,513	\$2,417,811	\$1,933,393	\$1,209,011	\$3,778,013
Principal expenses:							
Salaries and wages—							
Officers.....	\$508,287	\$105,556	\$323,807	\$69,389	\$15,017	\$9,400	\$27,728
Superintendents and managers.....	\$741,810	\$323,380	\$276,147	\$64,530	\$38,053	\$15,805	\$23,880
Technical employees.....	\$90,835	\$59,064	\$19,830	\$11,476	.....	\$300	\$2,589
Clerks, etc.....	\$492,680	\$193,008	\$161,020	\$40,540	\$55,813	\$3,875	\$10,010
Wage earners.....	\$10,777,353	\$5,953,020	\$8,163,652	\$1,181,826	\$260,555	\$309,725	\$32,398
Supplies and materials.....	\$4,784,079	\$2,367,024	\$1,381,223	\$364,251	\$250,820	\$10,401	\$101,700
Cost of ore purchased.....	\$699	\$699	.....	.....	.....	.....	.....
Fuel.....	\$1,743,747	\$1,103,807	\$427,842	\$129,078	\$22,100	\$1,739	\$50,092
Power.....	\$200,060	\$98,415	\$70,807	\$68,527	\$13,044	.....	\$39,783
Royalties and rents.....	\$780,004	\$295,427	\$268,024	\$23,717	\$172,270	\$9,800	\$16,468
Taxes.....	\$2,071,467	\$1,819,663	\$200,390	\$19,826	\$5,090	\$11,075	\$16,997
Contract work.....	\$315,843	\$65,798	\$305,081	\$19,804	\$2,000	\$7,000	\$15,100
Expenditures for development (included in the above items).....	\$1,141,088	\$586,047	\$467,422	\$31,918	\$25,935	\$14,871	\$24,896
Value of products.....	\$33,365,694	\$15,879,177	\$12,077,845	\$2,365,736	\$1,420,585	\$527,817	\$1,104,534
Persons engaged in industry.....	16,368	5,320	7,852	1,327	722	576	582
Proprietors and firm members (total).....	407	193	157	43	24	74	0
Number performing manual labor.....	210	108	85	13	7	2	4
Salaried officers.....	198	20	121	33	10	2	12
Superintendents and managers.....	356	134	135	30	20	12	16
Technical employees.....	55	34	12	6	.....	1	2
Clerks, etc.....	396	155	142	35	46	7	11
Wage earners (average number).....	14,857	4,793	7,285	1,171	622	480	500
Wage earners by occupation (Dec. 15):							
Above ground (total).....	7,229	2,341	2,137	1,341	280	625	469
Below ground (total).....	10,704	3,172	7,090	.....	421	.....	76
Foremen, shift bosses, etc.—							
Above ground.....	247	57	81	57	21	7	24
Below ground.....	238	109	110	.....	13	.....	9
Engineers, hoistmen, electricians, mechanics, etc.—							
Above ground.....	1,337	382	510	139	32	5	69
Below ground.....	153	61	80	.....	10	.....	2
Miners, quarrymen, and drillmen, including their helpers—							
Above ground.....	1,273	13	306	543	43	233	135
Below ground.....	5,790	950	4,590	.....	213	.....	37
Timbermen, trackmen, and men engaged in hauling, tramming, etc.—							
Above ground.....	713	71	428	153	41	0	11
Below ground.....	2,218	882	1,186	.....	138	.....	12
Muckers, loaders, laborers, and others not classified—							
Above ground.....	2,196	317	755	309	130	371	214
Below ground.....	2,359	1,167	1,130	.....	47	.....	15
Wage earners employed in mills and beneficiating plants—							
Above ground.....	1,433	1,301	47	50	19	.....	46
Number of females included in wage earners reported above—							
Above ground.....	2	.....	1	.....	1	.....	.....
Number of wage earners under 16 years of age included in those reported above—							
Above ground.....	5	4	.....	.....	.....	.....	1
Mineral land operated..... acres.	194,732	49,837	61,317	1,303	10,903	31,442	39,980
Land controlled, total..... acres.	227,961	49,887	62,857	2,035	11,055	41,997	60,709
Mineral land owned.....	149,345	40,009	30,239	389	2,466	29,772	38,980
Mineral land leased.....	45,492	2,844	31,178	414	8,442	1,670	944
Timber and other lands owned and leased.....	33,124	.....	940	782	145	10,525	20,779
Power used: Aggregate horsepower.....	100,190	57,088	28,385	8,305	1,857	100	4,425
Prime movers (horsepower, total).....	82,937	50,545	25,435	4,052	995	100	1,910
Steam engines—							
Number.....	673	187	302	69	24	1	80
Horsepower.....	51,058	21,301	24,394	3,491	882	40	1,545
Steam turbines—							
Number.....	20	14	5	.....	.....	.....	1
Horsepower.....	25,560	25,115	335	.....	.....	.....	110
Internal-combustion engines—							
Number.....	170	35	92	10	10	7	10
Horsepower.....	5,754	4,129	703	591	43	60	255
Purchased power (horsepower, total).....	17,193	6,543	2,950	4,253	932	.....	2,515
Electric motors operated by purchased current—							
Number.....	613	105	140	145	65	.....	158
Horsepower.....	17,103	6,453	2,950	4,253	932	.....	2,515
Other equipment operated by purchased power—							
Horsepower.....	90	90	.....	.....	.....	.....	.....
Electric motors run by current generated by enterprise using:							
Number.....	486	332	130	8	.....	.....	10
Horsepower.....	10,850	13,149	3,123	218	.....	.....	369
Fuel used:							
Coal, bituminous..... tons, 2,000 pounds.	488,858	300,657	143,433	22,484	4,655	.....	8,629
Wood..... cords.	2,930	497	400	194	380	450	1,045
Fuel oils..... barrels.	14,161	7,219	141	1,617	4	50	5,280
Gasolins and other volatile oils..... barrels.	2,425	979	873	300	70	67	304
Natural gas..... 1,000 cubic feet.	21,898	21,898	.....	.....	.....	.....	.....

¹ Includes 4 reduction mills operated independently of mines and 4 operations on dumps and old tailings.² Includes enterprises as follows: Abrasive materials, 2; copper, 1; granite, 2; iron ore, 8; marble, 1; pyrite, 1; sandstone, 4.

OKLAHOMA.

Oklahoma, which ranks seventeenth in size among the states (land area 69,414 square miles) and twenty-first in population (2,028,283 in 1920), ranked third in the value of mineral products for 1919. The state ranked sixth 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 operators of all mines, quarries, and wells in Oklahoma in 1919 was \$281,927,732. Deducting from this amount, \$9,758,073, the value of natural gas sold by some producers to others who used it as material or resold it and included it in the value of products reported by them, leaves \$272,169,659 as the net value of products for the state. This was an increase of 967 per cent as compared with the corresponding amount for 1909. The value of products reported for 1919 includes \$1,076,195, the value of by-products and receipts for power sold and for work or miscellaneous services for other enterprises. The increases in value of products, capital, wages, cost of supplies and materials and fuel and power, as shown in Table 1, are due in large part to general price increases and therefore exaggerate the growth of the industries which is indicated by the large increases in number of enterprises, wells operated, and in the average number of wage earners. The large increase shown in taxes is accounted for by impost of state output tax and addition of Federal income taxes since 1909.

The mining industries in Oklahoma in 1919, classified according to principal products and listed in order of value of products, were petroleum and natural gas, lead and zinc, bituminous coal, limestone, gypsum, granite, sandstone, asphalt, and abrasive materials. The industries for which statistics can be shown without disclosure of individual operations are ranked by value of products in Table 2.

The principal industry in Oklahoma in 1919 was the production of petroleum and natural gas. The statistics herein presented for this industry include data on the operation of plants engaged in the extraction of gasoline from natural gas, whether such plants were connected with enterprises operating wells or not. The petroleum and natural-gas industry embraced approximately 90 per cent of all enterprises in the mineral industries, employed 62.5 per cent of the total number of wage earners, and contributed 87.8 per cent of the gross value of all mineral products. The net value of products, after eliminating duplications resulting from sales of products by some producers to others, was \$237,739,377, which was much larger than the net value of products reported by any other state, and was more than 25 per cent of the total net value of products for the industry in the United States. Production of petroleum and natural gas was reported to the census from 31 counties. In these counties there were some 90 recognized produc-

tive pools or local oil fields distributed over approximately 7,500 square miles, all of this territory being part of the Mid-Continent Oil Field which extends into Kansas, Texas, and Louisiana.

The industry second in importance, ranked by value of products but third on basis of number of wage earners, was the mining of lead and zinc ores in Ottawa County. This industry included 5.7 per cent of the total number of enterprises in the state, employed 15.5 per cent of the total number of wage earners, and reported value of products to the amount of \$18,979,726, or 6.7 per cent of the total value of products for the state. In the production of lead and zinc ores Oklahoma outranked all other states.

The bituminous-coal mining industry was third in importance in Oklahoma in 1919 on basis of value of products, but second on basis of wage earners. This industry included practically 5 per cent of the total number of enterprises, employed 20.8 per cent of the total number of wage earners, and reported products valued at \$14,477,317, or 5.1 per cent of the total value of products of the state. The Oklahoma coal fields lie in the eastern part of the state and extend over a very wide territory from which 12 counties reported production in 1919.

Mining enterprises in Oklahoma in 1919 are classified in Table 3 according to the form or character of operating organizations. This table shows that corporations conducted the most important enterprises in all industries, and outclassed other forms of operating organizations in the number of wage earners employed and in the value of products reported.

The relatively large number of small enterprises, as measured by the average number of wage earners employed, is shown in Table 4. Of the total number of mining enterprises in Oklahoma, 13.4 per cent had no wage earners and 82.6 per cent reported fewer than 101 wage earners each and employed 48.5 per cent of the total number of wage earners. On the other hand, only 4 per cent of the total number of enterprises had more than 100 wage earners each and these enterprises employed 51.4 per cent of the total number of wage earners. The larger enterprises were reported by the petroleum and natural-gas, coal-mining, lead and zinc mining, and limestone-quarrying industries.

Table 5 shows that in a majority of enterprises employing wage earners and for more than half the wage earners in mining industries in Oklahoma in 1919 the prevailing hours of labor were 54 or more per week. Of the enterprises and wage earners in this class 97 per cent were in the petroleum and natural-gas industry. The 8-hour day and 6-day week prevailed in the coal-mining and lead and zinc mining industries. In the last-named industry, however, a number of enterprises which reported an 8-hour day for miners, also reported a 10-hour day for those wage earners employed in mills and otherwise above ground.

MINES AND QUARRIES—OKLAHOMA.

The statistics for wage earners presented in Table 6, showing changes in the number employed month by month, reflect conditions prevailing in the industries during the census year. The minimum shown for the coal industry in the month of November was due to the great coal strike during which the unemployment

in this important industry was so extensive as to abnormally reduce the number reported 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 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.....	1,934	804	123.8	Capital.....	\$740,757,478	\$70,000,411	947.3
Number of mines and quarries.....	284	212	34.0	Principal expenses:			
Number of petroleum and natural-gas wells.....	44,735	12,113	269.3	Salaries.....	12,532,452	1,342,557	833.5
Number of natural-gas gasoline plants.....	311			Wages.....	46,800,200	7,775,413	592.0
Persons engaged.....	40,855	13,580	200.8	Contract work.....	18,082,377	2,137,314	788.1
Proprietors and firm members, total.....	1,106	648	70.7	Supplies and materials ²	65,210,073	5,027,795	1,197.1
Number performing manual labor in or about the mines, quarries, and wells.....	58	80		Fuel and power.....	4,793,874	384,186	1,147.7
Salaried employees.....	5,835	1,274	358.0	Royalties and rents.....	30,688,890	2,783,075	1,092.3
Wage earners (average number).....	33,914	11,658	192.9	Taxes.....	10,338,243	308,216	3,254.2
Power used (horsepower).....	448,173	95,074	371.4	Value of products.....	281,027,732	25,037,892	999.7

¹ Percentages are omitted where base is less than 100.

² Includes natural gas purchased as material or for resale.

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.....	1,934	33,914	100.0	\$281,027,732	100.0	Coal, bituminous.....	94	7,040	20.8	\$14,477,317	5.1
Petroleum and natural gas.....	1,699	21,180	62.5	247,497,450	87.8	Limestone.....	13	278	0.8	567,238	0.2
Lead and zinc.....	111	5,253	15.5	18,979,726	6.7	Gypsum.....	5	122	0.4	283,025	0.1
						All other industries ¹	12	41	0.1	122,026	(²)

¹ Includes enterprises in industries as follows: Abrasive materials, 2; asphalt, 2; granite, 0; sandstone, 2.

² Less than one-tenth of 1 per cent.

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.....	1,934	33,914	\$281,027,732	\$145,774	100.0	100.0	100.0
Corporation.....	1,375	31,010	254,299,864	184,945	71.1	91.4	93.2
Individual.....	108	3,421	11,776,925	70,101	8.7	4.2	4.2
Firm.....	301	1,094	10,193,715	33,890	15.6	3.2	3.6
Other.....	90	389	5,657,428	62,800	4.7	1.1	2.0
PETROLEUM AND NATURAL GAS.....	1,699	21,180	247,497,450	145,672	100.0	100.0	100.0
Corporation.....	1,197	19,313	223,306,970	130,606	70.5	91.2	90.2
Individual.....	147	983	10,058,632	68,420	8.7	4.0	4.1
Firm.....	270	629	8,770,184	32,504	15.0	3.0	3.5
Other.....	85	265	5,296,658	62,302	5.0	1.2	2.1
LEAD AND ZINC.....	111	5,253	18,979,726	170,980	100.0	100.0	100.0
Corporation.....	88	4,587	10,257,559	154,745	70.3	87.3	85.7
Firm ¹	13	532	2,360,397	131,133	10.2	10.1	12.4
Other.....	5	134	361,770	72,364	4.5	2.0	1.9
COAL, BITUMINOUS.....	94	7,040	14,477,317	154,014	100.0	100.0	100.0
Corporation.....	75	6,777	13,980,027	150,488	79.8	93.3	96.0
Individual.....	12	154	274,234	22,833	12.8	2.2	1.9
Firm.....	7	109	210,450	30,922	7.4	1.5	1.5
LIMESTONE.....	13	278	567,238	43,638	100.0	100.0	100.0
Corporation.....	6	136	358,617	59,770	46.2	65.0	63.2
Individual ¹	7	92	208,621	20,810	53.8	33.1	36.8
GYPSUM.....	5	122	283,025	56,605	100.0	100.0	100.0
Corporation.....	5	122	283,025	56,605	100.0	100.0	100.0

¹ Includes 2 individuals.

² Includes 2 firms.

MINES AND QUARRIES—OKLAHOMA.

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.....	1,934	100.0	33,914	100.0	LEAD AND ZINC.....	111	100.0	5,253	100.0
No wage earners.....	259	13.4	.....	.....	1 to 5.....	14	12.6	47	0.9
1 to 5.....	994	51.4	1,900	5.8	6 to 20.....	29	26.1	333	6.3
6 to 20.....	350	18.0	3,740	11.0	21 to 50.....	33	29.7	1,161	22.1
21 to 50.....	107	5.6	5,358	15.8	51 to 100.....	21	18.9	1,376	26.2
51 to 100.....	77	4.0	5,408	15.9	101 to 500.....	14	12.6	2,330	44.5
101 to 500.....	72	3.7	13,229	39.0	LIMESTONE.....	13	100.0	278	100.0
501 to 1,000.....	6	0.3	4,215	12.4	No wage earners.....	1	7.7	.....	.....
PETROLEUM AND NATURAL GAS.....	1,899	100.0	21,180	100.0	1 to 5.....	2	15.4	5	1.8
No wage earners.....	253	14.9	.....	.....	6 to 20.....	5	38.5	57	20.5
1 to 5.....	963	50.7	1,878	8.9	21 to 50.....	4	30.8	115	41.4
6 to 20.....	307	16.2	3,100	14.9	101 to 500.....	1	7.7	101	36.3
21 to 50.....	99	5.2	3,051	14.4	GYPSUM.....	5	100.0	122	100.0
51 to 100.....	39	2.0	2,810	13.3	6 to 20.....	1	20.0	9	7.4
101 to 500.....	33	1.7	6,617	31.2	21 to 50.....	4	80.0	113	92.0
501 to 1,000.....	5	0.3	3,604	17.3	COAL, BITUMINOUS.....	94	100.0	7,040	100.0
No wage earners.....	1	1.1	.....	.....	No wage earners.....	1	1.1	.....	.....
1 to 5.....	10	10.6	24	0.3	1 to 5.....	10	10.6	152	2.2
6 to 20.....	14	14.9	152	2.2	6 to 20.....	14	14.9	916	13.0
21 to 50.....	27	28.7	916	13.0	21 to 50.....	27	28.7	1,222	17.4
51 to 100.....	17	18.1	1,222	17.4	51 to 100.....	17	18.1	4,175	59.3
101 to 500.....	24	25.5	4,175	59.3	501 to 1,000.....	1	1.1	551	7.8
501 to 1,000.....	1	1.1	551	7.8					

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.	35 and under.		36 to 43.		44 to 53.		54 to 62.		63 to 71.		72 to 84.	
			Enterprises.	Wage earners.	Enterprises.	Wage earners.	Enterprises.	Wage earners.	Enterprises.	Wage earners.	Enterprises.	Wage earners.	Enterprises.	Wage earners.
All industries.....	1,675	33,914	98	1,022	43	151	408	13,274	598	8,524	267	8,297	261	2,646
Petroleum and natural gas.....	1,446	21,180	91	185	38	51	218	2,004	573	8,029	266	8,267	260	2,644
Coal, bituminous.....	93	7,040	7	837	5	100	77	6,014	4	89	.....	.....	.....	.....
Lead and zinc.....	111	5,253	.....	.....	.....	.....	104	5,178	0	73	.....	.....	1	2
Limestone.....	12	278	.....	.....	.....	.....	4	51	8	227	.....	.....	.....	.....
Gypsum.....	5	122	.....	.....	.....	.....	.....	.....	4	92	1	30	.....	.....
All other industries.....	8	41	.....	.....	.....	.....	5	27	3	14	.....	.....	.....	.....

† Exclusive of 259 enterprises employing no wage earners in industries as follows: Coal, bituminous, 1; granite, 4; limestone, 1; petroleum and natural gas, 253.

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.....	33,959	32,974	32,560	32,756	33,094	33,247	33,056	34,366	35,940	36,977	36,726	<i>36,557</i>	36,540	80.5
Producing enterprises.....	33,914	32,940	32,531	32,713	33,058	33,205	33,015	34,320	35,880	36,617	36,674	<i>36,510</i>	36,499	80.5
Petroleum and natural gas.....	21,180	<i>19,544</i>	19,572	20,200	20,425	20,783	20,828	21,555	22,082	22,080	22,169	22,364	22,468	87.0
Coal, bituminous.....	7,040	7,596	7,589	8,950	7,206	7,337	7,293	7,512	7,880	8,102	8,299	<i>808</i>	7,754	11.6
Lead and zinc.....	5,253	5,429	4,950	5,054	5,024	4,968	4,503	4,857	5,346	5,847	5,759	5,745	5,849	77.0
Limestone.....	278	252	253	230	230	228	217	391	387	387	281	277	282	55.5
Gypsum.....	122	101	112	100	116	121	122	132	122	161	127	123	118	62.7
All other industries.....	41	18	25	31	57	62	41	47	65	40	39	39	28	27.7
Nonproducing enterprises.....	45	<i>34</i>	38	43	36	42	41	40	54	60	52	47	47	56.7

MINES AND QUARRIES—OKLAHOMA.

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

	Aggregate.	PRODUCING ENTERPRISES.							Non-producing enterprises. ¹
		Total.	Petroleum and natural gas.	Lead and zinc. ²	Coal, bituminous.	Limestone.	Gypsum.	All other. ³	
Number of enterprises.....	1,964	1,934	1,099	111	94	13	5	12	30
Number of mines and quarries.....	280	284		123	131	13	5	12	2
Number of petroleum and natural-gas wells.....	44,735	44,735	44,735						
Number of natural-gas gasoline plants.....	311	311	311						
Capital.....	\$742,804,134	\$740,757,178	\$600,003,144	\$27,628,030	\$12,238,940	\$830,356	\$330,882	\$100,814	\$2,100,950
Principal expenses:									
Salaries and wages—									
Officers.....	\$3,327,771	\$3,322,871	\$2,818,505	\$152,009	\$324,084	\$23,800	\$3,213	\$800	\$4,900
Superintendents and managers.....	\$4,122,032	\$4,120,422	\$3,375,531	\$347,989	\$361,097	\$29,561	\$0,244	\$3,000	\$15,610
Technical employees.....	\$720,769	\$720,769	\$684,013	\$37,405	\$16,351	\$3,000			
Clerks, etc.....	\$4,367,075	\$4,362,390	\$3,927,418	\$147,000	\$230,210	\$48,172	\$9,134	\$450	\$4,685
Wage earners.....	\$40,894,389	\$40,899,200	\$30,740,438	\$6,008,259	\$8,789,930	\$210,480	\$100,000	\$41,070	\$85,180
Supplies and materials.....	\$55,733,060	\$55,488,900	\$49,508,067	\$4,218,142	\$1,391,771	\$117,650	\$97,004	\$34,700	\$274,700
Cost of natural gas purchased as material and resold.....	\$9,758,073	\$9,758,073	\$9,758,073						
Fuel.....	\$3,858,714	\$3,826,607	\$2,373,833	\$738,285	\$630,314	\$40,167	\$32,408	\$10,603	\$32,047
Power.....	\$986,907	\$986,907	\$107,705	\$743,044	\$340,853	\$10,920	\$807	\$3,350	\$45,074
Royalties and rents.....	\$30,733,904	\$30,688,800	\$27,211,429	\$3,106,495	\$358,540	\$5,020	\$4,100	\$1,002	\$2,893
Taxes.....	\$10,341,120	\$10,338,243	\$9,732,360	\$228,309	\$68,140				\$108,887
Contract work.....	\$19,181,264	\$18,982,377	\$18,695,838						
Expenditures for development (included in the above items).....	\$55,823,200	\$55,218,005	\$54,340,770	\$590,701	\$270,428			\$2,000	\$604,208
Value of products.....	\$281,927,732	\$281,927,732	\$247,497,450	\$18,070,726	\$14,477,317	\$607,288	\$283,025	\$122,020	
Persons engaged in industry.....	40,928	40,855	26,378	5,035	8,206	351	134	61	78
Proprietors and firm members (total).....	1,100	1,100	980	68	33	9		16	3
Number performing manual labor.....	58	58	24	2	21	1		10	
Salaried officers.....	849	840	701	46	86	5	1	1	0
Superintendents and managers.....	1,070	1,056	1,340	133	154	21	0	2	14
Technical employees.....	327	327	283	20	17	2			
Clerks, etc.....	3,014	3,012	1,889	115	966	30	5	1	2
Wage earners (average number).....	33,959	33,914	21,180	5,253	7,040	278	122	41	46
Wage earners by occupation (Dec. 15):									
Above ground (total).....	26,873	26,806	22,615	2,174	1,454	307	111	55	67
Below ground (total).....	11,338	11,333		4,680	6,740		7		5
Foremen, shift bosses, etc.—									
Above ground.....	198	197		117	03	11	3	3	1
Below ground.....	291	291		151	140				
Enginemen, hoistmen, electricians, mechanics, etc.—									
Above ground.....	13,882	13,837	12,534	674	578	44	3	4	45
Below ground.....	124	124		58	66				
Miners, quarrymen, and drillmen, including their helpers—									
Above ground.....	238	238		1	101	72	47	17	
Below ground.....	6,150	6,145		2,054	4,080		5		5
Timbermen, trackmen, and men engaged in hauling, tramming, etc.—									
Above ground.....	297	297		27	226	33	11		
Below ground.....	2,771	2,771		225	1,844		2		
Muckers, loaders, laborers, and others not classified—									
Above ground.....	11,074	11,053	10,081	214	486	237	10	25	21
Below ground.....	2,002	2,002		1,392	610				
Wage earners employed in mills and beneficiating plants—									
Above ground.....	1,184	1,184		1,141			37	6	
Mineral and oil land operated..... acres.	1,850,229	1,844,805	1,780,061	4,014	104,936	1,099	1,025	1,070	5,924
Land controlled, total..... acres.	1,855,909	1,849,956	1,730,091	4,994	110,536	1,090	1,025	1,070	5,924
Mineral and oil land owned.....	192,921	192,771	163,546		26,729	394	1,265	837	150
Mineral and oil land leased.....	1,657,520	1,651,746	1,567,115	4,994	78,330	705	360	233	5,774
Timber and other lands owned and leased.....	5,468	5,468			5,468				
Power used: Aggregate horsepower.....	449,234	445,173	353,234	55,182	30,488	2,076	498	700	1,061
Prime movers (horsepower, total).....	416,842	415,781	340,243	33,324	30,140	1,870	498	700	1,061
Steam engines—									
Number.....	2,666	2,649	2,200	127	277	28	7	6	17
Horsepower.....	100,569	99,792	57,826	10,210	20,187	1,545	464	670	777
Steam turbines—									
Number.....	4	4			4				
Horsepower.....	700	700			700				
Internal-combustion engines—									
Number.....	9,617	9,603	9,328	227	31	8	2	7	14
Horsepower.....	315,273	314,980	291,417	22,814	253	331	44	130	284
Water wheels, turbines, and motors—									
Number.....	2	2		2					
Horsepower.....	300	300		300					
Purchased power (horsepower, total).....	32,392	32,392	3,991	21,858	0,343	200			
Electric motors operated by purchased current—									
Number.....	695	695	139	846	207	3			
Horsepower.....	31,492	31,492	3,091	21,858	0,343	200			
Other equipment operated by purchased power—									
Horsepower.....	900	900	900						
Electric motors run by current generated by enterprise using:									
Number.....	207	207	41	13	142		11		
Horsepower.....	6,161	6,161	394	490	5,159		118		
Fuel used:									
Coal, bituminous..... tons, 2,000 pounds.	282,539	280,339	7,209	90,022	177,267	3,615	1,680	596	2,200
Wood..... cords.	110	110	70	40					
Fuel oils..... barrels.	230,966	237,780	186,922	21,627		13,518	12,435	3,278	2,186
Gasoline and other volatile oils..... barrels.	21,011	21,011	17,336	2,004	507	275	020	203	
Natural gas..... 1,000 cubic feet.	16,392,807	16,338,700	15,194,427	1,040,381	154,670	331			54,098

¹ Includes 1 reduction mill operated independently of mines and 4 operations on dumps and old tailings.
² Includes enterprises as follows: Abrasive materials, 2; asphalt, 2; granite, 6; sandstone, 2.
³ Includes enterprises as follows: Lead and zinc, 2; petroleum and natural gas, 28.
⁴ Includes 2 females reported by 2 enterprises.