

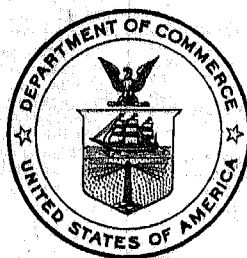
DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

FOURTEENTH CENSUS OF THE UNITED STATES
MINES AND QUARRIES: 1919

KENTUCKY, TENNESSEE
WEST VIRGINIA

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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 1900 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 1900. 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 1900 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 amount is given under this head representing 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.

Land 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.

KENTUCKY.

Kentucky, which ranks thirty-sixth among the states in size (land area, 40,181 square miles) and fifteenth in population (2,416,630 in 1920), ranked tenth in value of mineral products for 1919. The state ranked fifth in total number of persons engaged in the mining industries and in the average number of wage earners employed.

The gross value of products of all mines, quarries, and wells in Kentucky in 1919 amounted to \$98,486,910. This figure includes \$127,138, the amount received for mineral by-products, custom milling, power sold, and for work or miscellaneous services for other enterprises. It includes also a duplication of \$41,104, the value of natural gas sold by some producers to others who used it as material or resold it and included it in the products reported by them. The increase in value of products in 1919 was more than 700 per cent compared with the value of products reported at the census of 1909. This increase and the increases in capital, wages, cost of supplies and materials and fuel and power, as shown in Table 1, although due in large part to general price increases during the census interval, nevertheless show large growth in mining, which is also reflected by increases in number of enterprises, number of individual mines, quarries, and wells operated, and average number of wage earners employed.

The mining industries reported in Kentucky in 1919, classified according to principal products and listed in order of value of products, were bituminous coal, petroleum and natural gas, limestone, fluorspar, clay, asphalt, sandstone, phosphate rock, mineral pigments, and barytes. 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 Kentucky in 1919 was the mining of coal, which embraced 635 mining enterprises, or 67.7 per cent of the total number employed, 91.3 per cent of the total number of wage earners, and reported as value of products \$72,432,840, or 73.5 per cent of the total value of mineral products of the state. Kentucky ranked fifth in the United States in the production of bituminous coal. The coal-producing areas in the state extend over approximately 8,000 square miles in 22 eastern and southeastern counties which are part of the Middle Appalachian coal fields, and approximately 5,000 square miles in 10 counties in the western part of the state which are part of the Eastern Interior coal field. Approximately 75 per cent of the production in 1919 was from the eastern district in which Pike, Harlan, Letcher, Perry, Bell, and Floyd Counties were the most productive. Muhlenberg, Hopkins, and Webster Counties were the principal producers in the western district.

The industry second in importance was the production of petroleum and natural gas in which Kentucky ranked tenth in the United States. In this industry 196 enterprises, or approximately one-fifth of the total

number in the state, employed 4.9 per cent of the total number of wage earners and contributed products valued at \$23,329,521, or 23.7 per cent of the total. Production was reported from 32 counties in eastern, southern, and west central parts of the state.

Other mining industries in Kentucky were relatively small, but the Kentucky fluorspar, asphalt, and mineral pigments industries were important; the state ranked second among the states in the first two and third in the other.

A small amount of development work was done on mining properties which were unproductive in 1919. Eight petroleum enterprises and 3 coal-mining enterprises reported such work.

The mining enterprises in Kentucky in 1919 are classified according to form of operating organization in Table 3, which shows that corporations outclassed all other organizations in the number and size of enterprises operated. In all industries for the state as a whole and in the leading industries corporations employed practically all of the wage earners and contributed nearly the whole of the product, or a largely predominating share.

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 Kentucky, 89.1 per cent were in classes having no wage earners or fewer than 101. On the other hand, only 102 enterprises, or 10.9 per cent of the total number, had more than 100 wage earners each, and these enterprises employed 62.1 per cent of the total number of wage earners. The larger enterprises were in the coal-mining and petroleum and natural-gas industries and one in the asphalt industry.

Table 5 shows that in a majority of enterprises employing wage earners and for 72.6 per cent of the total number of wage earners the hours of labor were 44 to 53 per week. These hours were reported chiefly by enterprises in the coal-mining industry for which the 8-hour day and 6-day week prevailed. Longer hours, for the most part 54 to 62, ruled in other industries. In the petroleum and natural-gas industry the hours ranged from 8 to 12 and were commonly 10 per day; in the fluorspar industry the 9-hour day and 6-day week was the rule; and in the quarrying industries the 10-hour day and 6-day week prevailed.

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 in the coal industry in November was due to the great coal strike in that month. The abnormal minimum in this industry accounts for the low minimum in the same month in the combined figures for all industries.

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—KENTUCKY.

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.....	938	437	114.6	Capital.....	\$201,247,725	\$20,780,040	651.3
Number of mines and quarries.....	804	442	95.5	Principal expenses:			
Number of petroleum and natural gas wells.....	5,214	1,109	370.2	Salaries.....	7,310,616	965,148	657.5
Number of natural-gas gasoline plants.....	7			Wages.....	49,550,588	7,827,514	533.0
Persons engaged.....	47,893	19,657	143.6	Contract work.....	3,295,715	184,003	1,686.2
Proprietors and firm members, total.....	386	338	14.2	Supplies and materials.....	15,650,195	1,322,406	1,084.1
Number performing manual labor in or about the mines, quarries, and wells.....	115	75		Fuel and power.....	2,522,749	218,489	1,054.6
Salaried employees.....	3,944	1,022	285.9	Royalties and rents.....	5,814,424	422,579	1,275.9
Wage earners (average number).....	43,583	18,297	138.1	Taxes.....	2,605,300	90,122	2,610.4
Power used (horsepower).....	148,893	53,203	179.9	Value of products.....	98,486,910	12,100,075	713.9

¹ Percentages are omitted where base is less than 100.² Includes cost of natural gas purchased as material and 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.....	938	43,563	100.0	\$98,486,910	100.0	Flourspar.....	29	370	0.8	\$777,405	0.8
Coal, bituminous.....	635	39,769	91.3	72,432,840	73.5	Clay.....	18	260	0.6	375,577	0.4
Petroleum and natural gas.....	196	2,119	4.9	23,320,521	23.7	Sandstone.....	5	50	0.1	91,363	0.1
Limestone.....	47	676	1.6	1,126,109	1.1	Barytes.....	5	5	(¹)	9,375	(¹)
						All other industries ²	8	299	0.7	344,720	0.3

¹ Less than one-tenth of 1 per cent.² Includes enterprises in industries as follows: Asphalt, 1; mineral pigments, 1; phosphate rock, 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.....	938	43,563	\$98,486,910	\$104,997	100.0	100.0	100.0
Corporation.....	703	42,621	94,408,284	134,203	74.9	96.5	95.9
Individual.....	132	688	1,043,571	7,906	14.1	1.6	1.1
Firm.....	98	836	2,900,115	29,678	10.4	1.9	2.9
Other.....	5	18	134,940	26,988	0.5	(¹)	0.1
COAL, BITUMINOUS.....	635	39,769	72,432,840	114,067	100.0	100.0	100.0
Corporation.....	472	38,597	70,608,060	149,593	74.3	97.1	97.5
Individual.....	96	536	782,735	8,153	15.1	1.3	1.1
Firm.....	67	636	1,042,065	15,533	10.6	1.6	1.4
PETROLEUM AND NATURAL GAS.....	196	2,119	23,320,521	119,028	100.0	100.0	100.0
Corporation.....	169	2,018	21,507,275	127,262	86.2	95.2	92.2
Individual.....	7	8	81,831	11,600	3.0	0.4	0.4
Firm.....	15	76	1,605,475	107,032	7.7	3.5	6.9
Other.....	5	18	134,940	26,988	2.0	0.8	0.6
LIMESTONE AND SANDSTONE.....	52	732	1,217,472	23,413	100.0	100.0	100.0
Corporation.....	23	527	910,617	39,592	44.2	72.0	74.8
Individual.....	21	126	159,809	7,610	40.4	17.2	13.1
Firm.....	8	70	147,046	18,381	15.4	10.8	12.1
FLOURSAPAR.....	29	370	777,405	26,807	100.0	100.0	100.0
Corporation.....	20	322	672,588	33,629	69.0	87.0	86.6
Firm ²	9	48	104,817	11,646	31.0	13.0	13.5
BARYTES.....	5	5	9,375	1,875	100.0	100.0	100.0
Individual.....	5	5	9,375	1,875	100.0	100.0	100.0

¹ Less than one-tenth of 1 per cent.² Includes 2 individuals.

MINES AND QUARRIES—KENTUCKY.

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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.....	938	100.0	43,503	100.0	PETROLEUM AND NATURAL GAS..	196	100.0	2,119	100.0
No wage earners.....	30	3.8	.....	.....	No wage earners.....	32	16.3	.....	.....
1 to 5.....	269	28.4	683	1.6	1 to 5.....	90	45.0	182	8.6
6 to 20.....	273	29.1	3,022	6.0	6 to 20.....	49	25.0	464	21.9
21 to 50.....	151	16.1	4,930	11.3	21 to 50.....	14	7.1	436	20.6
51 to 100.....	110	11.7	7,858	18.0	51 to 100.....	7	3.6	500	23.6
101 to 500.....	94	10.0	17,734	40.7	101 to 500.....	4	2.0	537	25.3
501 to 1,000.....	5	0.5	3,368	7.7					
Over 1,000.....	3	0.3	5,908	13.7					
COAL, BITUMINOUS.....	635	100.0	39,769	100.0	LIMESTONE AND SANDSTONE.....	52	100.0	732	100.0
No wage earners.....	1	0.2	.....	.....	1 to 5.....	20	38.5	60	8.2
1 to 5.....	138	21.7	390	1.0	6 to 20.....	21	40.4	271	37.0
6 to 20.....	180	28.3	2,074	5.2	21 to 50.....	9	17.3	275	37.6
21 to 50.....	122	19.2	4,024	10.1	51 to 100.....	2	3.8	123	17.2
51 to 100.....	97	15.3	6,980	17.5					
101 to 500.....	89	14.0	10,976	27.7	FLUORSPAR.....	20	100.0	370	100.0
501 to 1,000.....	5	0.8	3,368	8.6	No wage earners.....	2	6.0	.....	.....
Over 1,000.....	3	0.5	5,908	15.0	1 to 5.....	8	27.6	24	6.5
					6 to 20.....	14	45.3	135	36.5
					21 to 50.....	4	13.8	140	37.8
					51 to 100.....	1	3.4	71	19.2

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—											
	Enter-prises.	Wage earners.	35 and under.		30 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.....	1,902	43,503	55	1,700	60	2,014	479	31,043	266	7,827	17	80	16	227
Coal, bituminous.....	684	89,769	51	1,718	66	2,000	489	30,970	78	5,075	.....	.....	.....	.....
Petroleum and natural gas.....	164	2,119	2	3	1	5	25	531	108	1,207	17	80	16	227
Limestone and sandstone.....	52	732	1	43	1	4	4	75	46	610	.....	.....	.....	.....
Fluorspar.....	27	370	.....	.....	.....	.....	4	21	23	349	.....	.....	.....	.....
All other industries.....	25	573	1	2	1	5	7	40	16	526	.....	.....	.....	.....

1 Exclusive of 36 enterprises employing no wage earners in industries as follows: Clay, 1; coal, bituminous, 1; fluorspar, 2; petroleum and natural gas, 32.

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.....	43,591	44,012	40,905	41,042	40,155	41,221	42,270	46,305	47,420	47,452	48,594	35,580	48,208	72.8
Producing enterprises.....	43,503	43,080	40,049	40,949	40,081	41,154	42,203	46,281	47,350	47,378	48,534	35,518	48,136	72.7
Coal, bituminous.....	39,769	40,839	37,590	37,742	36,008	37,620	38,507	41,875	42,019	42,046	44,522	31,408	44,346	70.5
Petroleum and natural gas.....	2,119	1,874	1,955	1,955	1,084	2,032	2,090	2,225	2,337	2,309	2,248	2,218	2,195	80.2
Limestone.....	52	545	361	468	734	778	778	885	903	879	788	710	583	38.2
Fluorspar.....	370	538	330	258	293	237	203	320	375	492	520	441	309	44.2
Clay.....	209	202	203	261	245	240	225	256	269	282	304	311	303	71.7
Sandstone.....	5	5	23	51	64	70	67	74	69	82	67	57	43	6.1
Barytes.....	5	.....	.....	4	4	4	4	4	7	6	11	8	8	36.4
All other industries.....	290	179	131	180	193	205	240	592	471	377	374	367	349	20.1
Nonproducing enterprises.....	68	58	46	93	74	67	76	74	70	79	60	73	72	34.4
Coal, bituminous.....	59	50	38	71	55	67	64	63	63	62	52	56	60	42.3
Petroleum and natural gas.....	12	8	13	22	19	10	12	11	7	17	8	17	6	9.1

MINES AND QUARRIES—KENTUCKY.

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

	Aggregate.	PRODUCING ENTERPRISES.									NONPRODUCING ENTERPRISES.		
		Total.	Coal, bituminous.	Petroleum and natural gas.	Limestone.	Fluor-spar.	Clay.	Sandstone.	Barytes.	All other. ¹	Total.	Petroleum and natural gas.	Coal, bituminous.
Number of enterprises.....	940	938	635	190	47	20	18	5	5	3	11	8	3
Number of mines and quarries.....	867	864	742		50	40	10	5	5	3	3		8
Number of petroleum and natural-gas wells.....	5,214	5,214		5,214									
Number of natural-gas gasoline plants.....	7	7		7									
Capital.....	\$201,811,996	\$201,247,725	\$137,500,306	\$56,788,005	\$975,318	\$3,213,322	\$728,301	\$189,242	\$610	\$1,456,581	\$504,271	\$332,320	\$231,045
Principal expenses:													
Salaries and wages—													
Officers.....	\$2,477,087	\$2,472,087	\$2,011,061	\$209,098	\$27,365	\$50,200	\$8,283	\$8,430		\$30,150	\$5,000	\$800	\$4,200
Superintendents and managers.....	\$2,558,468	\$2,542,675	\$2,095,102	\$345,020	\$10,949	\$43,044	\$17,451	\$2,425		\$22,021	\$15,703	\$0,193	\$0,000
Technical employees.....	\$452,667	\$452,547	\$388,508	\$33,328		\$1,500	\$3,115	\$2,100		\$23,000	\$120	\$120	\$0,000
Clerks, etc.....	\$1,845,883	\$1,843,307	\$1,047,230	\$147,904	\$8,405	\$10,871	\$8,097	\$000		\$22,101	\$1,570	\$030	\$046
Wage earners.....	\$19,022,104	\$19,550,588	\$15,015,853	\$2,645,512	\$520,009	\$281,273	\$222,789	\$35,087	\$2,882	\$220,403	\$71,510	\$13,201	\$58,225
Supplies and materials.....	\$15,734,345	\$15,618,091	\$10,944,940	\$4,006,574	\$216,310	\$150,893	\$48,029	\$11,710	\$87	\$245,330	\$110,254	\$56,785	\$59,400
Cost of natural gas purchased as material and for resale.....	\$11,104	\$11,104		\$11,104									
Fuel.....	\$1,041,526	\$1,037,821	\$1,553,058	\$233,411	\$95,073	\$43,007	\$5,050	\$7,383		\$30,178	\$4,705	\$2,365	\$1,350
Power.....	\$585,065	\$584,928	\$508,435		\$0,240					\$7,244	\$137		\$137
Royalties and rents.....	\$5,827,674	\$5,814,421	\$1,724,703	\$3,970,910	\$7,557	\$93,600	\$5,233	\$71	\$2,000	\$10,300	\$13,250	\$0,274	\$0,076
Taxes.....	\$2,005,388	\$2,005,300	\$1,017,039	\$901,974	\$8,233	\$8,931	\$4,005	\$770		\$3,148	\$1,088	\$028	\$160
Contract work.....	\$3,332,548	\$3,265,715	\$199,012	\$2,912,770	\$1,600	\$145,916	\$3,708		\$2,613		\$00,833	\$05,914	\$010
Expenditures for development (included in the above items).....	\$13,103,070	\$12,847,064	\$5,503,157	\$0,820,041	\$1,500	\$158,391	\$7,900			\$34,060	\$255,112	\$147,371	\$107,741
Value of products.....	\$98,480,810	\$98,480,910	\$72,432,840	\$23,320,521	\$1,126,109	\$777,405	\$375,577	\$01,363	\$0,375	\$344,720			
Persons engaged in industry.....	48,026	47,893	43,347	2,034	754	444	207	00	10	341	133	70	63
Proprietors and firm members (total).....	435	386	258	59	39	21	3	1	5		49	48	1
Number performing manual labor.....	115	115	96	9	10								
Salaried officers.....	809	805	655	102	13	18	8	4		5		2	2
Superintendents and managers.....	1,127	1,118	876	180	15	24	9	2		12	0	6	3
Technical employees.....	331	331	301	16		1	2	2		0			
Clerks, etc.....	1,693	1,690	1,438	168	11	10	6	1		10	3	2	1
Wage earners (average number).....	43,631	43,563	39,769	2,119	676	370	209	50	5	209	08	12	60
Wage earners by occupation (Dec. 15):													
Above ground, total.....	13,382	13,321	9,168	2,267	886	320	163	83	29	375	61	10	42
Below ground, total.....	36,364	36,330	30,038			140	101				25		26
Foremen, shift bosses, etc.—													
Above ground.....	448	445	369		31	17	4	3	4	17	3		3
Below ground.....	953	952	934			10	8				1		1
Enginemen, hoistmen, electricians, mechanics, etc.—													
Above ground.....	3,879	3,800	2,100	1,491	40	108	11	8		42	19	6	13
Below ground.....	1,604	1,604	1,001			8							
Miners, quarrymen, and drillmen, including their helpers—													
Above ground.....	1,482	1,482	864		415	27	46	50	4	70			
Below ground.....	19,599	19,584	19,402			69	118				15		15
Timbermen, trackmen, and men engaged in hauling, tramming, etc.—													
Above ground.....	1,578	1,575	1,320		105	17	26						
Below ground.....	6,904	6,904	6,838			26	40				17	3	3
Muckers, loaders, laborers, and others not classified—													
Above ground.....	5,832	5,796	4,442	803	187	51	70	5	21	208	36	13	23
Below ground.....	7,304	7,295	7,263			32					9		0
Wage earners employed in mills and beneficiating plants—													
Above ground.....	163	163	13		18	100		17		15			
Mineral and oil land operated..... acres	1,119,780	1,093,641	731,116	323,015	1,084	5,232	20,860	440	047	4,067	20,130	21,109	5,080
Land controlled, total..... acres	1,222,002	1,196,834	832,007	323,015	2,150	5,782	27,217	080	047	4,067	20,130	21,109	5,069
Mineral and oil land owned.....	510,083	500,713	451,374	20,213	1,731	2,893	20,803	437	166	3,897	3,370	70	3,300
Mineral and oil land leased.....	609,992	687,223	280,037	302,802	253	2,889	547	3	782	400	22,769	21,039	1,730
Timber and other lands owned and leased.....	101,927	101,808	100,596		175	550	367	210			20		20
Power used: Aggregate horsepower.....	148,579	148,593	122,804	13,795	4,485	2,208	226	040		080	080	100	580
Prime movers (horsepower, total).....	102,582	102,170	81,253	13,795	3,569	2,208	226	040		400	408	100	300
Steam engines—													
Number.....	722	716	442	151	55	42	8	14		4	0	4	2
Horsepower.....	60,193	65,827	57,005	2,738	3,320	1,536	170	040		400	300	00	300
Steam turbines—													
Number.....	43	43	43										
Horsepower.....	23,786	23,786	23,786										
Internal-combustion engines—													
Number.....	818	815	64	059	12	72	8				3	3	
Horsepower.....	12,003	12,563	402	11,057	240	757	47				40	40	
Purchased power (horsepower, total).....	46,997	49,717	45,551		010					250	280		280
Electric motors operated by purchased current—													
Number.....	1,176	1,174	1,143		25					6	2		2
Horsepower.....	46,997	46,717	45,551		010					250	280		280
Electric motors run by current generated by enterprise using:													
Number.....	1,955	1,953	1,025	1	4	21		2					2
Horsepower.....	53,957	53,817	53,222	1	240	329		26			2		140
Fuel used:													
Coal, bituminous, tons, 2,000 lbs. cords.....	725,101	724,385	670,943	8,406	14,900	9,183	1,127	2,040		8,726	716	176	540
Wood.....	675	675			70	570		35					
Fuel oil..... barrels.....	38,148	38,148	467	37,630	9	15							
Gasoline and other volatile oils..... barrels.....	12,077	12,069	1,338	9,437	322	780							
Natural gas..... 1,000 cubic feet.....	752,145	751,455		751,455						150	8	8	

¹ Includes enterprises as follows: Asphalt, 1; mineral pigments, 1; phosphate rock, 1.² Includes 8 wage earners under 16 years of age.

TENNESSEE.

Tennessee, which ranks thirty-fourth among the states in size (land area 41,687 square miles) and nineteenth in population (2,337,885 in 1920), ranked twenty-third in the value of mineral products in 1919. The state ranked nineteenth in the total number of persons engaged in the mining industries and in the average number of wage earners employed.

The total amount received for products by operators of all mines, quarries, and wells in Tennessee in 1919 was \$23,292,114, which was an increase of 83.5 per cent as compared with the gross value of products reported at the census of 1909. The value for 1919 includes receipts for mineral by-products, for power sold, and for work or miscellaneous services for other enterprises amounting to \$70,375. The statistics for 1909 include data on smelters operated in connection with mines, but similar data were excluded from the statistics for 1919.

Increases in value of products, capital, wages, cost of supplies and materials and fuel and power, as shown in Table 1, are largely due to general price increases and are, therefore, not a measure of growth in mining. A decrease in mining in Tennessee in 1919 as compared with 1909 is indicated by decrease in number of enterprises, and in the number of individual mines and quarries operated, and also by decrease in the average number of wage earners.

The mining industries reported in Tennessee, classified according to principal products and listed in order of value of products, were bituminous coal, phosphate rock, zinc (and lead), marble, iron ore, copper, limestone, barytes, clay, silica, petroleum and natural gas, mineral pigments, bauxite, manganese ore, and sandstone. The industries for which statistics can be shown without disclosure of individual operations are ranked by value of products in Table 2.

The leading industry in 1919 was the mining of bituminous coal. More than half of the mining enterprises in the state were engaged in this industry, and they employed 66 per cent of the total number of wage earners and reported products valued at \$14,024,432, or 60.2 per cent of the total. The coal-producing area is a northeast-southwest belt a little east of the center of the state. Production was reported from 10 northern counties which form part of the Middle Appalachian coal field, and 6 southern counties which form part of the Southern Appalachian coal field.

The industry second in importance in Tennessee was the mining of phosphate rock. The 19 enterprises reporting in this industry employed 10.8 per cent of the total number of wage earners and contributed as value of products \$3,139,671, or 13.5 per cent of the total value of products. The combined production of five counties, in the central and south-central sections of the state, gave Tennessee second rank in the United States in this industry in 1919.

The mining of lead-bearing zinc ores ranked third. The statistics for the three enterprises in this industry

have been combined with those for two copper enterprises in order to avoid disclosure of individual operations. These industries together employed 8.9 per cent of the total number of wage earners and reported 13.4 per cent of the total value of products. The operating copper mines are in the southeastern part of the state and the operating zinc mines in the northeastern part.

The marble industry was fourth in importance in the state, and Tennessee ranked second in the United States in 1919 in the value of marble products. Thirteen enterprises in this industry employed 3.7 per cent of the total number of wage earners and reported products valued at \$1,088,131, or 4.7 per cent of the total value of products.

The mining enterprises in Tennessee in 1919 are classified according to form of operating organization in Table 3, which shows that, for the state as a whole and for each of the industries presented separately, corporations outnumbered other forms of organization and conducted the most important enterprises.

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 Tennessee, 76.9 per cent had fewer than 101 wage earners each and employed 27.3 per cent of the total number of wage earners. On the other hand, only 44 enterprises, or 21.7 per cent of the total number, had more than 100 wage earners each, and these enterprises employed 72.8 per cent of the total number of wage earners. The largest enterprises were in the coal and copper mining industries.

Table 5 shows that in nearly one-half of the enterprises employing wage earners, and for 63.1 per cent of the wage earners reported, the hours of labor were 44 to 53 per week. In one-third of the enterprises and for about one-fourth of the wage earners the hours were 54 to 62 per week. In the coal and copper and zinc mining industries the 8-hour day and 6-day week was the rule, but a considerable number of enterprises in the coal industry reported a shorter week. In iron-ore mining, phosphate-rock mining, and in the quarrying industries the prevailing hours were 54 to 62 per week with the 10-hour day and 6-day week.

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 very low minimum in the coal industry in November was due to the great strike of the coal miners. The abnormal minimum in this industry accounts for the very low minimum in the same month for the combined statistics for all industries.

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—TENNESSEE.

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.....	203	216	-6.0	Capital.....	\$51,400,345	\$33,819,977	52.2
Number of mines and quarries.....	203	365	-27.9	Principal expenses:			
Number of petroleum and natural-gas wells.....	14	21		Salaries.....	1,638,395	988,288	65.8
Persons engaged.....	15,450	17,278	-10.6	Wages.....	12,987,338	7,358,588	76.5
Proprietors and firm members, total.....	67	87		Contract work.....	173,790	54,372	219.0
Number performing manual labor in or about the mines, quarries, and wells.....	17	24		Supplies and materials.....	3,892,397	* 1,613,571	141.2
Salaried employees.....	913	853	7.0	Fuel and power.....	1,250,953	645,376	95.2
Wage earners (average number).....	14,470	10,338	-11.4	Royalties and rents.....	554,743	617,997	-10.1
Power used (horsepower).....	56,685	34,523	64.2	Taxes.....	308,917	94,775	543.8
				Value of products.....	23,292,114	12,002,547	83.5

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

* Includes cost of ore and coal purchased for 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.....	203	14,470	100.0	\$23,292,114	100.0	Iron ore.....	12	824	5.7	\$820,118	3.6
Coal, bituminous.....	107	9,556	66.0	14,024,432	60.2	Limestone.....	21	340	2.4	534,848	2.3
Phosphate rock.....	19	1,568	10.8	3,139,671	13.5	Barytes.....	5	108	0.7	239,619	1.0
Copper and lead and zinc.....	5	1,282	8.9	3,121,803	13.4	Clay.....	10	177	1.2	182,705	0.8
Marble.....	13	540	3.7	1,088,181	4.7	All other industries ¹	11	96	0.5	131,700	0.6

¹ Includes enterprises in industries as follows: Bauxite, 1; manganese ore 3; mineral pigments, 2; petroleum and natural gas, 1; sandstone, 2; silica, 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.....	203	14,470	\$23,292,114	\$114,739	100.0	100.0	100.0
Corporation.....	158	14,015	22,689,088	143,008	77.8	99.0	97.4
Individual.....	27	283	368,084	13,593	18.3	2.0	1.6
Firm ¹	18	169	237,002	13,172	8.9	1.2	1.0
COAL, BITUMINOUS.....	107	9,556	14,024,432	131,069	100.0	100.0	100.0
Corporation.....	85	9,330	13,738,409	161,570	79.4	97.0	97.9
Individual.....	10	81	90,097	9,010	0.8	0.8	0.7
Firm ¹	12	145	194,926	16,244	11.2	1.5	1.4
PHOSPHATE ROCK.....	19	1,568	3,139,671	165,246	100.0	100.0	100.0
Corporation.....	15	1,524	3,054,688	203,640	78.0	97.2	97.8
Individual ²	4	44	84,983	21,246	21.1	2.8	2.7
MARBLE.....	13	540	1,088,181	83,702	100.0	100.0	100.0
Corporation.....	13	540	1,088,181	83,702	100.0	100.0	100.0
LIMESTONE.....	21	340	534,848	25,469	100.0	100.0	100.0
Corporation.....	14	283	439,149	31,368	99.7	81.1	82.1
Individual.....	4	47	60,824	15,706	10.0	13.5	12.6
Firm.....	3	19	28,875	9,625	14.3	5.4	5.4
CLAY.....	10	177	182,705	18,271	100.0	100.0	100.0
Corporation.....	6	172	174,619	29,103	90.0	97.2	95.6
Individual ²	4	5	8,086	2,022	4.0	2.8	4.4

¹ Includes 2 other forms of organization.² Includes 1 firm.

MINES AND QUARRIES—TENNESSEE.

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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.....	203	100.0	14,470	100.0	IRON ORE.....	12	100.0	824	100.0
No wage earners.....	3	1.5			1 to 5.....	1	8.3	2	0.2
1 to 5.....	30	14.8	71	0.5	6 to 20.....	2	16.7	38	4.6
6 to 20.....	56	27.6	717	5.0	21 to 50.....	3	25.0	112	13.6
21 to 50.....	47	23.2	1,516	10.5	51 to 100.....	4	33.3	244	29.6
51 to 100.....	23	11.3	1,030	11.3	101 to 500.....	2	16.7	428	51.9
101 to 500.....	41	20.2	8,657	59.8					
501 to 1,000.....	3	1.5	1,879	13.0	MARBLE.....	13	100.0	540	100.0
COAL, BITUMINOUS.....	107	100.0	9,550	100.0	6 to 20.....	5	38.5	66	12.2
1 to 5.....	12	11.2	33	0.3	21 to 50.....	5	38.5	179	33.1
6 to 20.....	28	26.2	350	3.7	51 to 100.....	2	15.4	147	27.2
21 to 50.....	22	20.6	778	8.1	101 to 500.....	1	7.7	148	27.4
51 to 100.....	14	13.1	993	10.4	LIMESTONE.....	21	100.0	349	100.0
101 to 500.....	20	27.1	6,165	64.5	1 to 5.....	3	14.3	2	0.6
501 to 1,000.....	2	1.9	1,237	12.9	6 to 20.....	11	52.4	163	46.7
PHOSPHATE ROCK.....	19	100.0	1,568	100.0	21 to 50.....	7	33.3	184	52.7
No wage earners.....	1	5.3			CLAY.....	10	100.0	177	100.0
1 to 5.....	2	10.5	9	0.6	No wage earners.....	2	20.0		
6 to 20.....	4	21.1	44	2.8	1 to 5.....	4	40.0	6	3.4
21 to 50.....	4	21.1	113	7.2	6 to 20.....	2	20.0	14	7.9
51 to 100.....	3	15.8	246	15.7	21 to 50.....	1	10.0	30	16.9
101 to 500.....	5	26.3	1,156	73.7	101 to 500.....	1	10.0	127	71.8
COPPER AND LEAD AND ZINC.....	5	100.0	1,282	100.0	BARYTES.....	5	100.0	108	100.0
6 to 20.....	1	20.0	7	0.5	6 to 20.....	1	20.0	17	15.7
101 to 500.....	3	60.0	633	49.4	21 to 50.....	4	80.0	91	84.3
501 to 1,000.....	1	20.0	642	50.1					

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.	
			Enter-prises.	Wage earners.	Enter-prises.	Wage earners.	Enter-prises.	Wage earners.	Enter-prises.	Wage earners.	Enter-prises.	Wage earners.
All industries.....	200	14,470	13	470	26	1,117	93	9,132	67	3,709	1	33
Coal, bituminous.....	107	9,550	8	455	22	1,077	75	7,791	2	233		
Phosphate rock.....	18	1,568	1	6	1	30	1	25	15	1,508		
Copper and lead and zinc.....	5	1,282					3	1,107	2	176		
Iron ore.....	12	824					1	19	11	806		
Marble.....	13	540							13	540		
Limestone.....	21	349	1	8	1	8	7	124	11	176	1	33
Clay.....	8	177	3	11	1	1	1	30	3	135		
Barytes.....	5	108					1	25	4	83		
All other industries.....	11	66			1	1	4	11	6	54		

1 Exclusive of 3 enterprises employing no wage earners in the following industries: Clay, 2; phosphate rock, 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.
		Janu-ary.	Febru-ary.	March.	April.	May.	June.	July.	August.	Sep-tember.	Octo-ber.	Novem-ber.	Decem-ber.	
All industries.....	14,470	15,364	14,322	14,114	13,677	14,572	14,731	14,974	15,304	15,227	15,777	10,408	15,172	66.0
Coal, bituminous.....	9,550	10,632	9,550	9,124	8,796	9,710	9,964	10,126	10,223	10,109	10,763	5,367	10,252	49.8
Phosphate rock.....	1,568	1,301	1,403	1,458	1,577	1,049	1,624	1,657	1,733	1,695	1,577	1,633	1,419	75.1
Copper and lead and zinc.....	1,282	1,423	1,332	1,420	1,272	1,284	1,261	1,159	1,184	1,182	1,206	1,370	1,311	80.0
Iron ore.....	824	1,007	953	980	790	644	601	639	763	822	885	849	922	60.0
Marble.....	540	407	468	502	520	553	568	536	564	564	531	546	568	78.8
Limestone.....	349	311	319	380	347	356	334	354	378	376	372	501	380	79.2
Clay.....	177	107	108	128	171	173	193	211	221	210	203	199	200	48.4
Barytes.....	108	53	33	58	124	132	122	145	146	139	124	114	106	22.6
All other industries.....	66	63	66	84	80	71	61	67	93	70	66	37	54	36.6

MINES AND QUARRIES—TENNESSEE.

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

	PRODUCING ENTERPRISES.									
	Total.	Coal, bituminous.	Phosphate rock.	Copper and lead and zinc.	Marble.	Iron ore.	Limestone.	Barytes.	Clay.	All other. ¹
Number of enterprises.....	203	107	19	5	13	12	21	5	10	11
Number of mines and quarries.....	203	143	23	8	17	24	21	7	10	10
Number of petroleum and natural-gas wells.....	14									14
Capital.....	\$51,400,345	\$20,951,471	\$14,657,404	\$8,016,670	\$1,001,333	\$3,788,115	\$350,106	\$333,067	\$234,375	\$1,330,066
Principal expenses:										
Salaries and wages—										
Officers.....	\$515,630	\$362,410	\$31,618	\$12,135	\$38,070	\$14,002	\$33,982	\$1,729	\$16,800	\$3,075
Superintendents and managers.....	\$615,081	\$367,238	\$73,744	\$72,806	\$33,895	\$22,040	\$11,344	\$15,420	\$9,140	\$3,375
Technical employees.....	\$128,083	\$72,897	\$14,440	\$20,737		\$3,002	\$863	\$5,300		\$875
Clerks, etc.....	\$370,591	\$220,202	\$54,092	\$55,207	\$10,832	\$12,000	\$3,823	\$1,500	\$1,800	\$575
Wage earners.....	\$12,987,338	\$8,609,051	\$1,174,759	\$1,646,278	\$407,012	\$583,033	\$243,303	\$05,275	\$71,028	\$62,700
Supplies and materials.....	\$3,892,307	\$2,009,072	\$628,533	\$021,230	\$249,023	\$160,791	\$05,398	\$44,406	\$23,455	\$10,880
Fuel.....	\$1,037,175	\$363,956	\$370,182	\$01,077	\$81,834	\$01,780	\$20,058	\$10,952	\$5,802	\$3,798
Power.....	\$222,908	\$50,055	\$1,750	\$153,477	\$0,241	\$120	\$7,351	\$1,208		
Royalties and rents.....	\$551,743	\$384,375	\$70,553	\$54,124	\$5,201	\$10,084	\$0,735	\$3,000	\$265	\$10,776
Taxes.....	\$608,917	\$460,768	\$33,423	\$47,036	\$15,655	\$0,190	\$3,430	\$706	\$1,540	\$3,200
Contract work.....	\$173,796	\$72,922	\$35,421	\$48,200			\$1,382		\$11,011	\$1,800
Expenditures for development (included in the above items).....	\$537,364	\$140,992	\$32,065	\$206,075	\$2,500	\$102,871	\$3,000		\$1,500	\$42,888
Value of products.....	\$23,292,114	\$14,024,432	\$3,130,671	\$3,121,808	\$1,088,131	\$829,118	\$534,848	\$250,010	\$182,705	\$131,706
Persons engaged in industry.....	16,450	10,170	1,674	1,373	500	850	385	125	107	77
Proprietors and firm members (total).....	67	36	5	1		2	12	2	5	4
Number performing manual labor.....	17	9					5		2	1
Salaried officers.....	170	108	16	3	10	2	13	2	5	2
Superintendents and managers.....	303	191	31	27	18	13	8	8	7	3
Technical employees.....	75	42	7	18		2	1	4		1
Clerks, etc.....	362	237	47	42	13	10	2	1	3	1
Wage earners (average number).....	14,470	9,656	1,568	1,282	540	824	349	103	177	66
Wage earners by occupation (Dec. 15):										
Above ground (total).....	9,682	2,744	1,450	351	580	680	414	120	210	118
Below ground (total).....	9,382	7,089	115	663		315				
Foremen, shift bosses, etc.—										
Above ground.....	240	101	48	8	19	25	21	8	12	7
Below ground.....	195	145	2	47		1				
Enginemen, hoist men, electricians, mechanics, etc.—										
Above ground.....	973	530	180	108	22	80	15	11	14	4
Below ground.....	471	392		71		8				
Miners, quarrymen, and drill men, including their helpers—										
Above ground.....	1,207	374	204	15	100	121	179	22	0	24
Below ground.....	5,502	5,030	90	241		201				
Timberman, trackmen, and men engaged in hauling, tramming, etc.—										
Above ground.....	872	540	102	34	12	60	40	4	2	
Below ground.....	2,069	1,638	7	415		39				
Muckers, loaders, laborers, and others not classified—										
Above ground.....	2,768	1,167	639	55	157	322	141	67	173	77
Below ground.....	1,065	784	10	180		66				
Wage earners employed in mills and beneficiating plants—										
Above ground.....	583	32	124	131	210	63	9	8		6
Number of wage earners under 16 years of age included in those reported above—										
Above ground.....	3	1	1					1		
Mineral and oil land operated.....acres..	361,000	298,364	23,462	14,510	1,244	4,404	504	2,060	742	21,201
Land controlled, total.....acres..	475,000	368,117	25,738	40,417	1,312	11,544	594	2,070	968	21,246
Mineral land owned.....	205,832	165,007	22,073	14,240	967	1,380	462	800	549	749
Mineral and oil land leased.....	156,869	120,317	1,879	270	255	3,168	132	1,750	103	20,182
Timber and other lands owned and leased.....	112,318	70,793	2,280	31,898	60	7,060		20	225	46
Power used: Aggregate horsepower.....	56,685	22,946	7,168	15,987	3,885	8,050	1,990	471	106	404
Prime movers (horsepower, total).....	30,297	20,748	7,070	2,640	3,135	3,619	1,231	850	106	404
Steam engines—										
Number.....	327	146	55	8						
Horsepower.....	36,220	19,093	7,020	1,437	3,115	3,407	22	4	4	9
Steam turbines—										
Number.....	4	2		1			1			
Horsepower.....	2,008	928		1,000			80			
Internal-combustion engines—										
Number.....	69	40	1	1						
Horsepower.....	1,040	722	50	3	3	1	1	8	3	4
Water wheels, turbines, and motors—										
Number.....	1									
Horsepower.....	17									
Purchased power (horsepower, total).....	17,388	2,203	98	13,497	750	10	705	115		
Electric motors operated by purchased current—										
Number.....	324	73	5	215			11	5		
Horsepower.....	17,378	2,203	98	13,447	750		705	115		
Other equipment operated by purchased power—										
Horsepower.....	10					10				
Electric motors run by current generated by enterprise using:										
Number.....	342	263	63	0	7					
Horsepower.....	12,562	10,520	1,792	50	200					
Fuel used:										
Coal, bituminous.....tons, 2,000 pounds..	298,649	141,222	88,029	17,209	20,704	10,523	8,354	1,450	1,430	723
Coke.....tons, 2,000 pounds..	29			23						
Wood.....cords.....	5,831	104	5,679							
Fuel oils.....barrels.....	1,240	187	245	800		20	28			
Gasoline and other volatile oils.....barrels.....	1,017	353	42	8	1	2		4	4	
Natural gas.....1,000 cubic feet..	1,360						205	802	12	1,350

¹Includes enterprises as follows: Bauxite, 1; manganese ore, 3; mineral pigments, 2; petroleum and natural gas, 1; sandstone, 2; silica, 2.

WEST VIRGINIA.

West Virginia, which ranks fortieth among the states in size (land area 24,022 square miles) and twenty-seventh in population (1,463,701 in 1920), ranked second in the value of mineral products in 1919. The state also ranked second in the total number of persons engaged in the mining industries and in the average number of wage earners employed.

The gross value of products of all mines, quarries, and wells in West Virginia in 1919 was \$295,606,620. This amount includes, in addition to the value of specified mineral products, amounts received by operators for other products, for power sold, and for work or miscellaneous services for other enterprises. The gross value of products shows an increase of 287.5 per cent as compared with the gross value of products reported at the census of 1909. Deducting from this gross value \$5,871,497, the value of natural gas sold by some producers to others who used it as material or sold it again, leaves \$289,735,123, the net value of products for 1919, which is 284.3 per cent larger than the corresponding value for 1909.

This increase and the increases in capital, wages, cost of supplies and materials and fuel and power, as shown in Table 1, although in large part due to general price increases during the census interval, nevertheless show growth in mining as do also the increases in number of enterprises, number of individual mines, quarries, and wells operated, and in average number of wage earners employed.

The mining industries in West Virginia in 1919, classified according to principal products, were bituminous coal, petroleum and natural gas, limestone, sandstone, and clay, which are ranked by value of products in the order named, in Table 2.

The leading industry was the mining of bituminous coal in which West Virginia was outclassed only by Pennsylvania. This industry included 926 enterprises, or 54 per cent of the total number in the state, employed 86.4 per cent of the total number of wage earners, and reported products to the value of \$193,108,343, or 65.3 per cent of the total. The state produces bituminous and semibituminous coals in varieties for all uses. The productive territory lies in a central belt extending across the state from northeast to southwest and in a zone along the Ohio River. The producing districts are part of the Northern and Middle Appalachian coal fields and occupy approximately 9,500 square miles in parts of 36 counties.

The industry second in importance was the production of petroleum and natural gas. The statistics here 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 well operations or not. Seven hundred and fifty-one enterprises, or 43.8 per cent of the total number in the mineral industries of the state in 1919, were petroleum or natural-gas or natural-gas gasoline enterprises. They reported 12.2 per cent of

the total number of wage earners and products valued at \$99,518,304, or 33.7 per cent of the total value of products of the state. The producing pools or local fields cover approximately 10,000 square miles throughout the northwestern half of the state, 30 counties reporting production in 1919.

The total value of products for the coal and petroleum and natural-gas industries combined was 99 per cent of the total value of products of the state. The other industries are therefore relatively small, but both the limestone and sandstone quarrying industries in West Virginia are important, in that they furnish a large share of the country's supply of limestone and sandstone (silica) used in manufacturing industries as well as furnishing stone for construction work.

In addition to the activities of producing mines, three coal and five petroleum and natural-gas enterprises reported operations for development of non-producing properties; these enterprises reported \$133,107 expended for development work, which represented a very small portion of the aggregate expenditures reported for the state.

Table 3 classifies the producing mining enterprises of the state according to form of organization and shows that, for the mining industries as a whole, corporations conducted 68.3 per cent of the total number of enterprises, employed 97.4 per cent of the wage earners, and reported 96.8 per cent of the total value of products. A preponderance of corporations over other forms of organization is shown for each of the industries considered separately.

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 West Virginia, 16.2 per cent employed no wage earners, and 68.3 per cent employed fewer than 101 wage earners. On the other hand, 266 enterprises, or 15.6 per cent of the total number, had more than 100 wage earners each and employed 74.7 per cent of the total number of wage earners. Most of these larger enterprises were in the coal-mining industry; the remainder were in the petroleum and natural-gas and limestone industries.

Table 5 shows that in a majority of enterprises employing wage earners and for 76.7 per cent of the total number of wage earners the hours of labor were 44 to 53 per week. In the coal-mining industry these hours prevailed with an 8-hour day and a 6-day week, but in the petroleum and natural-gas industry and in the quarrying industries 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.

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—WEST VIRGINIA.

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.....	1,714	798	114.8	Capital.....	\$533,138,835	\$219,460,909	142.9
Number of mines and quarries.....	1,325	718	84.5	Principal expenses:			
Number of petroleum and natural-gas wells.....	27,363	15,146	80.7	Salaries.....	14,054,240	3,828,584	260.6
Number of natural-gas gasoline plants.....	230			Wages.....	119,577,940	35,980,736	252.3
Persons engaged.....	110,327	77,814	41.8	Contract work.....	3,880,691	4,465,926	12.9
Proprietors and firm members, total.....	1,667	909	83.4	Supplies and materials.....	46,611,674	12,541,375	271.7
Number performing manual labor in or about the mines, quarries, and wells.....	124	81		Fuel and power.....	6,608,796	1,212,825	469.6
Salaried employees.....	7,848	3,495	124.5	Royalties and rents.....	14,845,553	7,790,172	90.4
Wage earners (average number).....	100,812	78,410	37.3	Taxes.....	11,078,927	969,443	1,047.5
Power used (horsepower).....	704,279	416,282	69.2	Value of products.....	295,006,020	76,287,889	287.5

¹ A minus sign (—) denotes decrease. Percentages are omitted where base is less than 100.² Includes cost of natural gas purchased as material and for resale.

TABLE 2.—MINING 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.....	1,714	100,812	100.0	\$295,006,020	100.0	Limestone.....	17	1,008	1.0	\$1,927,490	0.7
Coal, bituminous.....	926	87,095	86.4	193,108,343	65.3	Sandstone.....	15	343	0.3	885,588	0.3
Petroleum and natural gas.....	751	12,302	12.2	99,518,334	33.7	Clay.....	5	69	0.1	166,895	0.1

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.....	1,714	100,812	\$295,006,020	\$172,460	100.0	100.0	100.0
Corporation.....	1,170	98,207	286,062,517	244,458	98.3	97.4	98.8
Individual.....	136	704	2,920,403	17,598	0.7	0.7	1.0
Firm.....	351	1,847	6,155,479	17,537	20.5	1.8	2.1
Other.....	27	81	468,218	17,341	1.0	0.1	0.2
COAL, BITUMINOUS.....	926	87,095	193,108,343	208,540	100.0	100.0	100.0
Corporation.....	804	85,269	189,232,443	235,364	86.8	97.9	98.0
Individual.....	53	475	1,095,619	20,672	5.7	0.5	0.6
Firm.....	69	1,364	2,780,281	40,204	7.5	1.6	1.4
PETROLEUM AND NATURAL GAS.....	751	12,302	99,518,334	132,511	100.0	100.0	100.0
Corporation.....	339	11,581	93,942,568	277,117	45.1	94.1	94.4
Individual.....	108	197	1,762,791	16,322	14.4	1.6	1.8
Firm.....	278	473	3,848,198	12,044	37.0	3.8	3.4
Other.....	23	51	464,767	17,875	3.5	0.4	0.5
LIMESTONE.....	17	1,008	1,927,490	113,382	100.0	100.0	100.0
Corporation.....	13	991	1,897,479	145,960	70.5	98.8	98.4
Firm.....	4	12	30,011	7,508	23.5	1.2	1.6
SANDSTONE.....	15	343	885,588	59,039	100.0	100.0	100.0
Corporation.....	10	331	870,380	87,038	66.7	90.5	98.3
Firm.....	5	12	15,228	3,016	33.3	3.5	1.7

¹ Includes 1 other form of organization.² Includes 2 individuals.

TABLE 4.—SIZE OF PRODUCING ENTERPRISES, BY AVERAGE NUMBER OF WAGE EARNERS, FOR ALL 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.....	1,714	100.0	100,812	100.0	LIMESTONE.....	17	100.0	1,003	100.0
No wage earners.....	277	16.2	.....	.....	No wage earners.....	1	5.9	.....	.....
1 to 5.....	449	26.2	957	9.9	1 to 5.....	3	17.6	8	0.8
6 to 20.....	282	16.4	3,207	3.3	6 to 20.....	2	11.8	15	1.5
21 to 50.....	254	14.8	8,230	8.2	21 to 50.....	4	23.5	118	11.8
51 to 100.....	180	10.9	12,065	12.0	51 to 100.....	3	17.0	223	22.2
101 to 500.....	243	14.2	40,291	40.0	101 to 500.....	4	23.5	639	63.7
501 to 1,000.....	15	0.9	10,215	10.1					
Over 1,000.....	8	0.5	15,848	15.7					
COAL, BITUMINOUS.....	920	100.0	87,095	100.0	SANDSTONE.....	15	100.0	343	100.0
1 to 5.....	85	9.2	263	0.3	1 to 5.....	6	40.0	17	5.0
6 to 20.....	192	20.7	2,373	2.7	6 to 20.....	5	33.3	60	17.5
21 to 50.....	231	24.9	7,001	8.7	21 to 50.....	1	6.7	22	6.4
51 to 100.....	170	18.4	11,770	13.5	51 to 100.....	3	20.0	244	71.1
101 to 500.....	230	24.8	40,884	53.8	CLAY.....	5	100.0	69	100.0
501 to 1,000.....	13	1.4	8,915	10.2	6 to 20.....	3	60.0	22	31.9
Over 1,000.....	5	0.5	9,289	10.7	21 to 50.....	2	40.0	47	68.1
PETROLEUM AND NATURAL GAS..	751	100.0	12,302	100.0					
No wage earners.....	270	36.8	.....	.....			
1 to 5.....	355	47.3	609	5.4					
6 to 20.....	80	10.7	827	6.7					
21 to 50.....	16	2.1	451	3.7					
51 to 100.....	10	1.3	728	5.9					
101 to 500.....	9	1.2	1,708	14.4					
501 to 1,000.....	2	0.3	1,300	10.6					
Over 1,000.....	3	0.4	6,550	53.3					

TABLE 5.—NUMBER OF PRODUCING ENTERPRISES AND AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR ALL 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.....	1,437	100,812	87	2,102	59	3,187	947	77,202	287	15,666	40	1,431	17	134
Coal, bituminous.....	920	87,095	30	2,028	46	3,170	801	74,125	47	7,702	2	70	.....	.....
Petroleum and natural gas.....	475	12,302	57	74	12	16	140	3,081	211	7,636	38	1,861	17	134
Limestone.....	16	1,003	.....	.....	.....	.....	.....	.....	16	1,003	.....	.....	.....	.....
Sandstone.....	15	343	.....	.....	1	1	2	25	12	317	.....	.....	.....	.....
Clay.....	5	69	.....	.....	.....	.....	4	61	1	8	.....	.....	.....	.....

1 Exclusive of 277 enterprises employing no wage earners in the following industries: Limestone, 1; petroleum and natural gas, 276.

TABLE 6.—WAGE EARNERS, BY MONTHS, ALL 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.....	100,830	100,187	93,274	92,824	93,737	97,318	99,483	104,794	106,662	107,828	107,803	97,291	108,759	85.3
Producing enterprises.....	100,812	100,187	93,274	92,824	93,737	97,313	99,454	104,774	106,637	107,801	107,778	97,245	108,720	85.4
Coal, bituminous.....	87,095	87,044	80,378	79,740	80,329	83,060	85,070	90,496	92,194	93,614	93,759	83,379	94,887	84.0
Petroleum and natural gas.....	12,302	11,833	11,085	11,693	12,007	12,199	12,378	12,857	12,856	12,687	12,637	12,425	12,417	90.2
Limestone.....	1,003	907	912	1,014	1,039	1,054	994	1,022	1,095	1,035	960	992	984	82.8
Sandstone.....	343	325	291	304	294	343	351	330	395	389	357	379	358	73.7
Clay.....	69	78	68	78	68	67	67	67	67	68	65	70	74	78.2
Nonproducing enterprises.....	18	.....	.....	.....	.....	5	29	20	25	27	25	46	39	10.9
Coal, bituminous.....	13	.....	.....	.....	.....	5	24	19	18	20	24	29	28	41.4
Petroleum and natural gas.....	5	.....	.....	.....	.....	.....	5	1	13	7	1	17	11	5.9

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

	Aggregate.	PRODUCING ENTERPRISES.						NONPRODUCING ENTERPRISES.		
		Total.	Coal, bituminous.	Petroleum and natural gas.	Limestone.	Sandstone.	Clay.	Total.	Coal, bituminous.	Petroleum and natural gas.
Number of enterprises.....	1,722	1,714	920	751	17	15	5	8	3	5
Number of mines and quarries.....	1,328	1,325	1,287	1,287	17	10	5	3	3	5
Number of petroleum and natural-gas wells.....	27,363	27,363	27,363	27,363	27,363	27,363	27,363	27,363	27,363	27,363
Number of natural-gas-gasoline plants ¹	230	230	230	230	230	230	230	230	230	230
Capital.....	\$533,664,008	\$533,138,835	\$344,014,848	\$180,275,406	\$1,275,947	\$1,220,560	\$140,035	\$525,173	\$303,410	\$221,763
Principal expenses:										
Salaries and wages—										
Officers.....	\$1,398,270	\$1,393,170	\$3,546,415	\$793,008	\$20,159	\$27,822	\$1,800	\$5,100	\$5,100	.....
Superintendents and managers.....	\$5,298,219	\$5,293,310	\$4,470,144	\$730,647	\$11,877	\$20,011	\$0,040	\$4,000	\$3,900	\$1,000
Technical employees.....	\$1,154,808	\$1,153,658	\$1,058,405	\$90,403	\$750	.....	.....	\$1,250	\$1,250	.....
Clerks, etc.....	\$4,116,407	\$4,114,232	\$3,183,598	\$389,067	\$30,243	\$8,087	\$2,307	\$1,205	\$240	\$905
Wage earners.....	\$119,596,964	\$119,577,949	\$105,701,150	\$12,410,434	\$979,024	\$338,150	\$2,585	\$10,015	\$14,251	\$4,704
Supplies and materials.....	\$40,804,021	\$40,740,077	\$26,983,284	\$14,227,852	\$19,472	\$04,102	\$15,277	\$64,514	\$10,277	\$54,207
Cost of natural gas purchased as material and for resale.....	\$5,871,497	\$5,871,497	.....	\$5,871,497	.....	.....	.....	.....	.....	.....
Fuel.....	\$3,021,553	\$3,021,485	\$2,725,087	\$1,088,710	\$69,933	\$30,293	\$3,402	\$08	.....	\$08
Power.....	\$2,987,311	\$2,987,311	\$2,853,341	\$30,400	\$58,213	\$45,327	.....	.....	.....	.....
Royalties and rents.....	\$14,850,543	\$14,845,553	\$5,025,301	\$8,902,007	\$11,364	.....	\$1,847	\$1,000	\$3,500	\$1,490
Taxes.....	\$11,081,607	\$11,078,927	\$6,644,226	\$4,371,110	\$51,812	\$8,085	\$3,288	\$2,680	\$1,648	\$1,032
Contract work.....	\$3,944,560	\$3,889,691	\$405,581	\$3,484,110	.....	.....	.....	\$54,809	.....	\$54,809
Expenditures for development (included in the above items).....	\$17,649,405	\$17,516,298	\$4,235,208	\$13,270,683	\$2,530	\$7,877	.....	\$133,107	\$35,018	\$98,089
Value of products.....	\$205,006,020	\$205,006,020	\$193,108,543	\$99,518,304	\$1,027,490	\$885,588	\$106,805	.....	.....	.....
Persons engaged in industry.....	110,364	110,327	93,767	15,032	1,003	385	80	37	20	17
Proprietors and firm members (total).....	1,070	1,007	273	1,876	8	9	1	9	.....	9
Number performing manual labor.....	124	124	63	87	2	2	2	2	2	2
Salaried officers.....	1,395	1,303	1,139	211	0	0	0	0	0	0
Superintendents and managers.....	2,177	2,173	1,707	335	21	10	4	4	4	4
Technical employees.....	737	736	683	47	1	1	1	1	1	1
Clerks, etc.....	3,579	3,576	2,773	761	24	9	4	3	1	2
Wage earners (average number).....	100,830	100,812	87,005	12,802	1,003	343	60	18	13	5
Wage earners by occupation (Dec. 15):										
Above ground (total).....	\$34,344	\$34,303	\$20,400	12,430	1,087	427	9	41	20	15
Below ground (total).....	75,582	75,578	75,513	.....	.....	.....	65	4	4	.....
Foremen, shift bosses, etc.—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Above ground.....	806	880	.....	.....	35	10	.....	1	1	.....
Below ground.....	2,114	2,114	2,110	.....	.....	.....	4	.....	.....	.....
Enginemen, hoistmen, electricians, mechanics, etc.—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Above ground.....	13,410	13,395	5,089	8,201	72	31	2	15	14	1
Below ground.....	4,971	4,971	4,967	.....	.....	.....	4	.....	.....	.....
Miners, quarrymen, and drillmen, including their helpers—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Above ground.....	2,013	2,013	1,410	.....	448	145	1	.....	4	.....
Below ground.....	37,906	37,902	37,925	.....	.....	.....	37	4	4	.....
Timbermen, trackmen, and men engaged in hauling, tramming, etc.—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Above ground.....	3,713	3,713	3,046	.....	35	30	2	.....	.....	.....
Below ground.....	10,853	10,853	10,843	.....	.....	.....	10	.....	.....	.....
Muckers, loaders, laborers, and others not classified—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Above ground.....	14,027	14,002	9,192	4,220	444	137	19	25	11	14
Below ground.....	13,078	13,078	13,068	.....	.....	.....	.....	.....	.....	.....
Wage earners employed in mills and beneficiating plants—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Above ground.....	291	291	210	.....	.....	68	4	.....	.....	.....
Mineral and oil land operated..... acres	4,593,732	4,578,747	1,834,207	2,782,470	2,585	8,878	607	14,985	3,418	11,567
Land controlled, total..... acres	4,732,419	4,687,434	1,940,557	2,732,470	4,628	8,978	901	14,985	3,418	11,567
Mineral and oil land owned.....	1,032,408	1,030,320	1,022,874	65,377	4,890	738	402	2,088	2,088	.....
Mineral and oil land leased.....	3,527,781	3,514,584	838,080	2,066,793	1,716	8,140	145	12,897	1,330	11,567
Timber and other lands owned and leased.....	82,230	82,230	79,893	.....	1,048	100	294	.....	.....	.....
Power used: Aggregate horsepower.....	704,326	704,279	355,470	338,194	6,373	3,480	747	47	.....	47
Prime movers (horsepower, total).....	486,946	485,899	144,240	336,519	2,533	1,200	747	47	.....	47
Steam engines—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Number.....	4,280	4,280	778	3,416	56	27	3	.....	.....	.....
Horsepower.....	210,152	210,152	123,212	88,102	2,821	1,220	737	.....	.....	.....
Steam turbines—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Number.....	40	40	40	.....	.....	.....	.....	.....	.....	.....
Horsepower.....	18,969	18,969	18,969	.....	.....	.....	.....	.....	.....	.....
Internal-combustion engines—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Number.....	10,525	10,523	136	10,883	1	2	1	2	.....	2
Horsepower.....	250,825	250,778	2,059	248,087	12	40	10	47	.....	47
Purchased power (horsepower, total).....	218,380	218,380	211,239	1,375	3,540	2,226	.....	.....	.....	.....
Electric motors operated by purchased current—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Number.....	6,185	6,185	6,008	61	85	81	.....	.....	.....	.....
Horsepower.....	218,323	218,323	211,182	1,375	3,540	2,226	.....	.....	.....	.....
Other equipment operated by purchased power—	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Horsepower.....	57	57	57	.....	.....	.....	.....	.....	.....	.....
Electric motors run by current generated by enterprise using:	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Number.....	2,865	2,865	2,500	355	4	.....	6	.....	.....	.....
Horsepower.....	95,084	95,084	87,256	7,615	120	.....	93	.....	.....	.....
Fuel used:										
Coal, bituminous..... tons, 2,000 pounds.....	1,157,991	1,157,091	1,124,614	7,500	13,097	10,383	1,497	.....	.....	.....
Wood..... cords.....	50	50	.....	.....	50	.....	.....	.....	.....	.....
Fuel oils..... barrels.....	524	524	339	185	.....	.....	.....	.....	.....	.....
Gasoline and other volatile oils..... barrels.....	2,541	2,541	2,424	103	.....	.....	.....	.....	.....	.....
Natural gas..... 1,000 cubic feet.....	12,150,899	12,140,540	287,042	11,800,629	.....	310	1,202	1,350	.....	1,350

¹ Exclusive of 1 enterprise, which operated a plant that produced also carbon black, included in the census of manufactures.
² Includes 2 wage earners under 16 years of age.