
MINES AND QUARRIES

CONTENTS

	Page
General explanations.....	837
Table:	
1. General statistics, producing and nonproducing enterprises: 1920.....	842
2. General statistics for producing enterprises: 1920, 1919, and 1909.....	842
3. Summary for producing enterprises, by industries: 1920 and 1919.....	843
4. Producing enterprises—Summary for leading industries and States: 1920.....	846
5. Prevailing hours of labor—Number of producing enterprises and number of wage earners, by leading industries: 1920.....	847
6. Wage earners in producing enterprises, by months and by industries: 1920.....	849
7. Consumption of fuel and electric energy, by industries: 1920.....	851
8. Consumption of fuel and electric energy, by States: 1920.....	851
9. Detailed statistics, by industries: 1920.....	852
10. Producing enterprises—General statistics in detail, by States: 1920.....	856

MINES AND QUARRIES

GENERAL EXPLANATIONS

This chapter presents in condensed form statistics based on data collected in the Census of Mines and Quarries for 1929, with comparative figures for prior censuses. It is designed to meet the requirements of those who desire statistics of the principal mining industries, for the United States as a whole and for States. The general report and also detailed statistics for States and for selected industries are contained in the report of the Census of Mines and Quarries—General Report.

Scope of the census.—The Census of Mines and Quarries is taken decennially. The data are compiled primarily for the purpose of showing the absolute and the relative magnitude and the growth or the decline of the several industries covered. Incidentally, the effort is made to present statistics throwing light on character of ownership, *size of enterprises*, hours of labor, and similar subjects. When the statistics are used for these purposes, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits, it is imperative that due attention be given to their limitations.

The statistics given in the census reports for 1929 include data for all mineral-producing activities, with the following exceptions:

(1) The production of petroleum and natural gas, salt, products derived from natural brines (salt, bromine, calcium chloride, iodine, etc.), marls, natural mineral waters, certain minor and rare minerals (tin, zirconium, chromium, beryllium, magnesium, radium ores, monazite, etc.), and noncommercial clay (clay mined by clay-products manufacturers and used in their own production).

(2) The production of bituminous coal by enterprises whose output was less than 1,000 tons.

(3) The production of sand and gravel by enterprises whose output was less than 25,000 tons. Data for a number of glass-sand and molding-sand enterprises reporting less than 25,000 tons are included, but no data were collected from a larger number of such enterprises whose output fell below this limit.

(4) The activities of other mining and quarrying enterprises whose output was valued at less than \$2,500 or which, if not productive, did development work costing less than \$2,500.

(5) Production by governmental (State, county, and municipal) enterprises, as well as production of stone, sand, and gravel by railroad and public-utility plants for their own consumption. (However, production of coal by governmental enterprises was covered in the canvass.)

(6) The mining of placer gold and the hunting for precious stones by itinerant individuals and miners employing no help.

The scope of the census for 1929 differed considerably from that for 1919, as follows:

(1) The petroleum and natural-gas industries were canvassed for 1919 but not for 1929.

(2) The sand and gravel, glass-sand, and molding-sand industries were canvassed for the first time for 1929.

(3) The quarrying of limestone carried on in connection with the manufacture of lime and cement was also covered by the census for 1929 but not by that for 1919.

(4) Data for the production of sandstone ground into sand are included in the statistics for the glass-sand, the sand and gravel, or the silica industry, according to the nature of the product, whereas in other censuses these data have been included in the statistics for the sandstone industry.

Milling and manufacturing.—Much of the products of mines must be benefited, improved in grade, or otherwise treated at or near the mine before the material is suitable for smelting, manufacturing, or other purposes. Among the processes employed are crushing, grinding, washing, drying, air separation, flotation, amalgamation, sintering, etc. Although such milling processes are in the nature of manufacturing, they are commonly considered as belonging to the mining industries, and when they are performed at or near mines by mining enterprises, or by enterprises operating on a custom basis, the data pertaining to them are included in the statistics for the several mining industries. On the other hand, certain other processes by which the mined product is materially changed in nature or otherwise adapted to use, and which ordinarily represent the major activities of the enterprises, are considered as manufacturing, and data for these are not included in the statistics for mines and quarries. Such processes include:

- (1) The smelting and refining of metals.
- (2) The manufacture of cement and lime, and of gypsum, clay, and phosphate products, etc.
- (3) The processing of stone (shaping, dressing, polishing, etc.).

Exceptions to this occur in the cases of a number of establishments which produced lime or processed stone in connection with their quarrying activities but which were unable to segregate the data for these manufacturing activities from those for quarrying. In such instances the manufacturing data are included in the statistics for the quarrying industries.

On the other hand, some mining and quarrying activities have been treated as belonging to manufacturing industries, and data for these have not been included in any way in the statistics for mines and quarries. This was chiefly for the reason that the manufacturing phases are predominant in these industries, and accuracy could not be attained by an estimated segregation of the data for mining from those for manufacturing. There was also the further reason that it was necessary to preserve comparability between the figures for the censuses of manufactures for 1909, 1919, and 1929. This class of operations, excluded from the Census of Mines and Quarries, includes chiefly: The mining of clay and the manufacture of clay products at the same locality when carried on by the same establishment; the mining of salt and the raising of brines and their conversion into commercial salt and other products.

Period covered.—The returns relate to the calendar year 1929 or to 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 within the year.

The enterprise.—The term "enterprise" represents one or more mines or quarries, all within the same county, operated under a common ownership or under unified control, or for which only one set of books of account was kept, and for which a single report was made. Thus a single enterprise may comprise a number of plants at several localities within the same county, but reports for individual mines and quarries were obtained whenever it was practicable for the operator to make such reports. In all cases where the plants under one unified control were not all located within the same county, a separate report was obtained for the enterprise or enterprises in each of the counties. The enterprise is further defined as being limited to a single industry. In cases where plants in different industries were operated under unified control, a separate report was obtained, as a rule, for the plant or plants in each industry, but in a very few cases where separate reports for plants in two or more industries could not be obtained, a single enterprise represents more than one industry. (See "Classification of enterprises by industries.") The number of enterprises shown in the tables is equivalent to the number of individual reports tabulated, and does not represent the number of individual operators. The latter is considerably smaller than the number of enterprises, because most operators were able to file a separate return for each mine or quarry operated.

Number of mines and quarries.—Under this designation is given the count of the number of mines and quarries shown by the returns received. The unit of enumeration for mines and quarries is 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 represents those in operation in 1929.

Classification of enterprises by industries.—The enterprises reported have been grouped by industries according to the kinds of products. In the case of metal mines whose products contained two or more metals, the enterprises were classified according to the metal of chief value. In other cases in which two or more minerals were produced in the same operation, and for which it was impracticable for the operators to file separate returns for the several products, the classification has been determined by the principal product. However, only a few enterprises made consolidated reports covering more than one kind of product.

Several changes have been made in the classification of enterprises for 1929 as compared with 1919, as follows:

(1) Data for production of diatomaceous earth and siliceous mica schist (ganister) have been included in the statistics for the silica industry instead of in those for the abrasive-materials and sandstone industries, respectively, as for 1919.

(2) Data for production of fuller's earth and filtering earths have been combined for 1929.

(3) Data for production of glass sand from quarried sandstone are included in the statistics for the glass-sand industry for 1929 instead of in those for the sandstone industry, as for 1919.

(4) Separate industry classifications are shown for gold, silver, lead, and zinc enterprises for 1929, instead of the dual classifications (gold-silver and lead-zinc) used in previous censuses.

Influence of changes in prices.—In comparing figures for the values of products with the corresponding ones for earlier censuses, account should be taken of changes in the general price level of commodities. To the extent to which this factor has been influential, the figures fail to afford an exact measure of the increase or decrease in the volume of production.

Persons engaged in the industries.—The following general classes of persons engaged in the mining and quarrying industries are distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) other salaried employees (including superintendents, managers, technical employees, clerks, and others on a salary basis), and (4) wage earners. In the reports of the census for 1919, separate figures were given for technical employees and for clerks and other subordinate salaried employees.

The figures for employees do not include the number employed in connection with expenditures for contract work, as no record is normally kept for those persons engaged by contractors in the fulfillment of a particular contract. Such contractual arrangements, when made, are ordinarily restricted to the sinking of shafts, the driving of tunnels, the construction of surface plants, etc., and only infrequently do they involve the actual extraction of minerals.

The number of persons engaged in each industry was reported for a single representative day. The 14th of December was selected as representing normal conditions of employment in most industries, but where this date was not a representative one a 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 such employees does not ordinarily vary much from month to month.

The average number of wage earners was obtained by totaling the number reported as employed on the 15th of each month and dividing the sum 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 on any given date.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and for wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings either of salaried employees or of 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, they doubtless 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 exact numbers of wage earners working given numbers of hours per week. The inquiry called merely for a report as to the prevailing practice followed in each enterprise. Occasional variations in hours from one part of the year to another, as well as differences in hours for underground and for surface workers, were disregarded, and no attention was paid to the fact that the hours of labor of a few wage earners might be different from those of the majority. All the wage earners in 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 presentation of the hours of labor.

Expenses.—The expenses reported in the census for 1929 were salaries and wages; cost of supplies and fuels, including the freight charges thereon; cost of purchased electric energy; and cost of contract work. The reports for 1919 included, in addition, data for royalties, rents, taxes, and cost of materials purchased for resale.

Supplies, fuel, and power.—Statistics for cost of supplies, fuel, and purchased electric energy relate to the amounts consumed during the year, which may be more or less than the amounts purchased during the year. The term "supplies" is applicable to mine, mill, and quarry supplies.

Contract work.—The amounts reported under this head include expenditures for both productive operations and those prosecuted for development only; they are in effect indirect expenditures for salaries, wages, supplies and materials, fuel and power. (See Persons engaged in the industries.)

Expenditures for development work.—The expenses reported as defined above include costs both of productive operations and of development work. In the statistics for producing enterprises those parts of the expenses for salaries, wages, contract work, supplies, fuel, and electric energy which were charged by the mine operators to development work are shown as expenditures for such work.

Cost of mining and profits.—The census statistics do not show the entire cost of mining operations, and consequently can not be used for the calculation of profits. No account has been taken of depletion, depreciation, interest, rent of offices and buildings, insurance, taxes, rents, royalties, selling expenses, and other sundry expenses.

Value of products.—The amounts given under this heading represent the selling values at point of production, or f. o. b. at point of shipment, or such other values as may represent the net values of or the amounts received for the products mined or quarried in 1929 according to the terms under which they were disposed of, and also include the values, at point of production, of products used by the operating company. The total value of products includes, in addition to the value of the principal product, the amounts received for secondary products, custom milling, power sold, and miscellaneous services. It is to be noted, particularly with respect to the industries producing metalliferous ores, that amounts received by the producers, i. e., the values of products as reported by the census, stand in no readily discernible relation to the quantities and the market values of products recoverable from the materials mined. The census figure for the value of products for the copper-mining industry, for example, must not be taken as the value of copper produced, but only as the value at the mine of ores, concentrates, etc.

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

Fuel.—Statistics on the quantity of fuel used are shown only for anthracite, bituminous coal, coke, fuel oil, gasoline, kerosene, and gas. They relate to the quantity used during the year, which may be more or less than the quantity purchased.

Detailed reports on mines and quarries.—The mines and quarries statistics in this section of the Abstract have been excerpted from the final report of the Decennial Census of Mines and Quarries for 1929, which was taken as a part of the Fifteenth Decennial Census. This report is published in a single quarto volume, the contents of which are described below.

General Report.—Statistics by Subjects.

Introduction and general explanations.

Principal statistics.

Geographic distribution.

Type of ownership.

Scale of operation.

Power.

Time in operation.

Persons engaged.

General tables.

(This section has been published separately in pamphlet form.)

Reports by States.

This section is an assembly of the reports for the individual States.

Each of these State reports gives statistics by industries for the State as a whole. The subjects covered (for the State as a whole and for certain industries in the State) include personnel, hours of labor, size of enterprises (as measured by number of wage earners), character of organization, power equipment, and fuel consumption.

(These statistics have also been published in 13 reports in pamphlet form, each covering three or more States.)

Reports by Industries.

This section is an assembly of the reports for the 39 industries covered by the census classification.

(The industry reports have also been published separately in pamphlet form, 6 in number, each covering a single industry or a group of related industries.)

TABLE 1.—GENERAL STATISTICS, PRODUCING AND NONPRODUCING ENTERPRISES: 1929

SUBJECT	Total, all enterprises	Producing enterprises	NONPRODUCING ENTERPRISES	
			Number or amount	Per cent of total
Number of enterprises.....	10,996	10,135	861	7.8
Number of mines and quarries.....	12,508	11,602	904	7.2
Persons engaged, total.....	870,480	863,948	6,532	0.8
Proprietors and firm members.....	4,929	4,897	32	0.6
Salaried officers and employees.....	53,331	52,633	698	1.3
Wage earners (average for the year).....	812,220	806,418	5,802	0.7
Power equipment (total horsepower).....	7,584,463	7,514,843	69,620	0.9
Prime movers.....	2,780,116	2,743,025	37,091	1.3
Electric motors driven by purchased energy.....	4,804,347	4,771,818	32,529	0.7
Principal expenses, total.....	\$1,075,944,174	\$1,061,167,937	\$14,776,237	0.9
Salaries.....	130,022,742	137,638,624	1,884,118	1.0
Wages.....	1,099,895,307	1,091,989,848	7,905,459	0.7
Contract work.....	17,913,729	17,056,484	857,245	4.8
Supplies.....	297,554,048	293,568,383	3,985,665	1.3
Fuel.....	49,363,661	49,145,531	218,130	0.4
Purchased electric energy.....	72,194,687	71,769,087	425,600	0.6
Value of products.....	2,392,831,178	2,392,831,178		
Expenditures for development (included above in "Principal expenses").....	89,046,000	76,488,000	13,168,000	14.7
Machinery and other equipment purchased during the year (total cost).....	86,732,832	84,508,448	2,224,384	2.0

¹ Includes data for salaried officers and employees of "Central Administrative" offices.

TABLE 2.—GENERAL STATISTICS FOR PRODUCING ENTERPRISES: 1929, 1919, AND 1909

[A minus sign (-) denotes decrease]

SUBJECT	1929		1919 ¹	1909 ¹	PER CENT OF INCREASE	
	All industries	Exclusive of data for sand and gravel, etc. ¹			1919-1929	1909-1919
Number of enterprises.....	10,135	9,003	11,406	12,089	-21.0	-5.2
Number of mines and quarries.....	11,602	10,277	13,731	18,127	-25.2	-24.3
Persons engaged, total.....	863,948	841,652	652,565	682,329	-11.0	-3.0
Proprietors and firm members.....	4,897	4,629	7,605	13,703	-39.8	-43.8
Salaried officers and employees ²	52,633	48,608	56,515	37,940	-13.9	48.9
Wage earners (average for the year).....	806,418	788,367	888,355	930,680	-11.3	-4.5
Power equipment (total horsepower).....	7,514,843	6,970,091	4,900,102	3,384,750	42.2	44.8
Prime movers.....	2,743,025	2,502,132	3,341,350	3,170,270	-25.1	5.1
Electric motors driven by purchased energy.....	4,771,818	4,467,950	1,568,752	205,480	186.0	658.6
Principal expenses, total.....	\$1,061,167,937	\$1,000,941,456	\$1,720,930,632	\$814,320,031	-7.0	111.3
Salaries ²	137,638,624	126,008,291	115,800,617	40,092,005	8.8	151.4
Wages.....	1,091,989,848	1,006,605,507	1,161,414,979	559,546,144	-8.2	107.6
Contract work.....	17,056,484	16,595,298	10,716,518	12,151,388	54.9	-11.8
Supplies and materials.....	293,568,383	280,022,710	331,026,604		-15.4	
Fuel.....	49,145,531	44,693,297	74,051,877	100,520,894	-39.7	120.3
Purchased electric energy.....	71,769,087	66,416,383	27,229,977		(143.0)	
Value of products.....	2,392,831,178	2,280,384,091	2,220,670,543	1,052,569,127	2.4	111.5

¹ For purposes of comparison, the figures for the several years have been adjusted as follows: For 1929, by deducting data for the sand and gravel, molding-sand, and glass-sand industries; for 1919, by deducting data for the petroleum and natural-gas industries; for 1909, by deducting data for the petroleum, natural-gas, peat, and precious-stones industries.

² Figures include data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—SUMMARY FOR PRODUCING ENTERPRISES, BY INDUSTRIES: 1929 AND 1919

[The figures for 1929 have been adjusted by omitting data for the sand and gravel, glass sand, and molding sand industries; those for 1919, by deducting data for the petroleum and natural gas industries. The totals for 1919 include data for the chromite industry]

[Value of products expressed in thousands of dollars]

INDUSTRY	NUMBER OF ENTERPRISES		NUMBER OF MINES AND QUARRIES		WAGE EARNERS (AVERAGE FOR THE YEAR)		HORSEPOWER		VALUE OF PRODUCTS	
	1929	1919	1929	1919	1929	1919	1929	1919	1929	1919
All industries, total..	9,063	11,466	10,277	13,731	788,357	888,355	6,970,091	4,900,102	2,280,384	2,226,671
Coal:										
Anthracite.....	198	251	1,303	2,421	142,801	147,372	1,041,465	896,789	384,854	304,084
Bituminous.....	4,976	8,636	5,620	8,282	458,732	545,798	3,124,187	2,155,035	966,604	1,145,678
Metals:										
Copper.....	143	105	180	229	44,502	43,717	701,701	522,426	283,517	181,258
Iron ore.....	180	200	208	406	28,516	45,741	408,821	370,859	107,335	218,218
Lead and zinc.....	303	432	375	473	25,907	21,884	357,737	229,401	112,428	76,579
Gold and silver, lode.....	241	740	258	799	7,046	15,436	98,772	149,100	26,107	58,832
Gold, placer.....	32	112	37	132	578	1,380	20,280	35,632	3,779	9,309
Mercury.....	40	26	40	29	1,029	748	5,625	2,607	2,820	1,803
Manganese.....	19	35	21	37	354	909	2,342	5,800	1,185	2,188
Minor metals ¹	26	32	30	37	1,244	1,371	13,469	6,081	6,050	3,916
Stone:										
Limestone.....	1,167	895	1,259	925	32,300	22,099	535,469	213,717	117,258	52,944
Granite.....	406	358	434	381	10,637	8,049	108,217	55,614	30,381	18,279
Basalt.....	137	183	144	174	3,053	3,336	63,881	37,307	15,644	9,658
Slate.....	120	101	130	104	4,098	3,513	33,817	20,013	10,480	5,721
Marble.....	70	48	88	62	3,350	1,732	30,198	15,625	7,539	4,398
Sandstone.....	145	255	172	276	2,156	4,287	28,935	33,869	6,812	10,085
Miscellaneous.....	204	234	1,841	28,527	8,475
Other nonmetals:										
Abrasive materials ²	30	34	36	34	402	317	3,828	1,748	1,411	722
Asbestos.....	11	10	11	11	195	146	2,114	420	307	250
Asphalt and bituminous rock.....	21	9	25	12	1,123	324	13,109	648	5,124	750
Barite.....	42	89	44	98	844	919	6,066	3,029	1,801	1,592
Clay.....	199	345	236	350	4,139	5,433	31,877	21,203	10,753	10,086
Feldspar.....	51	30	58	32	608	349	6,543	1,782	1,935	584
Fluorspar.....	28	54	30	72	1,053	1,124	6,513	7,135	2,858	3,335
Fuller's and filtering earths.....	22	0	24	0	991	824	8,221	2,538	4,812	2,010
Gypsum.....	60	47	63	48	2,078	2,191	26,498	15,032	6,740	6,806
Magnesite.....	5	11	5	11	351	448	3,197	2,540	2,044	2,170
Mica.....	24	65	32	69	228	448	1,721	803	516	607
Millstones and pulpstones.....	14	11	14	11	164	37	2,517	220	621	65
Phosphate rock.....	26	49	33	69	3,201	4,373	104,146	49,039	13,044	10,300
Silica ³	70	24	73	20	1,433	166	11,771	2,032	4,645	372
Sulphur and pyrites.....	9	21	10	22	2,199	2,301	33,932	22,629	37,129	20,345
Talc and soapstone.....	25	28	28	30	550	958	10,530	7,053	2,988	2,302
Miscellaneous minerals ⁴	19	44	19	47	305	604	3,978	8,040	3,503	1,350

¹ Collieries, 241; dredges, 42; washeries (culm-bank), 20.

² Collieries, 261; dredges, 81; washeries (culm-bank), 70.

³ See Table 9.

⁴ For 1910, included in figures for other stone industries (principally basalt and sandstone).

TABLE 3.—SUMMARY FOR PRODUCING ENTERPRISES, BY INDUSTRIES: 1929 AND 1919—Continued

[Amounts in thousands of dollars]

INDUSTRY	WAGES		PAID FOR CONTRACT WORK		COST OF SUPPLIES AND MATERIALS		COST OF FUEL AND PURCHASED ELECTRIC ENERGY	
	1929	1919	1929	1919	1929	1919	1929	1919
All industries, total.....	1,066,606	1,161,415	16,595	10,717	280,623	331,627	111,110	101,812
Coal:								
Anthracite.....	229,967	210,289	6,802	1,558	43,367	60,172	13,928	13,306
Bituminous.....	574,800	682,601	1,800	2,860	106,438	142,433	38,209	37,177
Metals:								
Copper.....	73,200	66,890	2,595	422	43,995	35,803	15,237	14,866
Iron ore.....	40,905	75,713	1,653	1,672	18,561	27,188	9,040	10,295
Lead and zinc.....	39,192	30,708	1,654	893	18,344	15,718	7,038	5,375
Gold and silver, lode.....	12,982	23,818	694	1,237	5,933	17,709	1,875	3,059
Gold, placer.....	970	1,914	2	133	590	2,245	605	1,144
Mercury.....	1,384	828	15	8	464	403	299	157
Manganese.....	392	1,086	6	149	140	448	71	98
Minor metals ³	1,507	1,690	86	8	1,417	884	408	225
Stone:								
Limestone.....	30,188	23,926	419	666	20,736	10,968	8,402	4,176
Granite.....	12,640	8,588	39	119	3,019	2,593	1,762	1,065
Basalt.....	4,498	3,991	32	41	2,202	2,031	1,040	720
Slate.....	4,884	3,128	27	90	602	632	634	417
Marble.....	3,292	1,452	18	21	564	552	545	224
Sandstone.....	2,626	4,449	48	54	983	1,664	306	848
Miscellaneous ⁴	2,406	-----	52	-----	1,629	-----	446	-----
Other nonmetals:								
Abrasive materials ³	491	322	37	62	145	116	64	66
Asbestos.....	237	92	2	-----	36	47	30	5
Asphalt and bituminous rock.....	1,255	265	84	6	618	376	177	25
Barite.....	648	760	24	10	155	230	133	70
Clay.....	3,768	5,367	20	126	1,494	1,417	769	453
Feldspar.....	527	264	14	12	239	98	83	39
Fluorspar.....	1,112	1,100	17	146	626	634	177	103
Fuller's and filtering earths.....	853	541	351	9	425	338	447	300
Gypsum.....	2,628	2,478	7	4	795	1,530	421	600
Magnesite.....	466	652	56	51	252	332	288	296
Mica.....	195	288	-----	7	65	108	35	23
Millstones and pulpstones.....	221	48	-----	-----	43	11	23	7
Phosphate rock.....	3,304	3,901	21	104	1,543	2,162	1,983	1,819
Silica ³	1,677	166	4	2	614	58	283	22
Sulphur and pyrites.....	3,483	3,067	10	87	3,340	2,068	4,474	2,985
Talc and soapstone.....	615	835	17	53	531	345	128	156
Miscellaneous minerals ³	301	516	-----	52	168	292	88	152

³ See Table 9.⁴ For 1919, included in figures for other stone industries (principally basalt and sandstone).

TABLE 4.—PRODUCING ENTERPRISES—SUMMARY FOR LEADING INDUSTRIES AND STATES: 1929

INDUSTRY AND STATE	Number of enterprises	Number of mines or quarries	Wage earners (average for the year)	Wages	VALUE OF PRODUCTS	
					Amount	Per cent distribution
Anthracite	198	303	142,801	\$229,987,059	\$384,854,300	100.0
Pennsylvania.....	198	303	142,801	229,987,059	384,854,300	100.0
Bituminous coal	4,976	5,020	458,732	574,800,072	960,693,771	100.0
Pennsylvania.....	1,151	1,287	121,000	157,730,207	262,456,657	27.1
West Virginia.....	686	890	99,217	126,350,600	217,922,962	22.5
Illinois.....	384	401	49,817	68,922,106	114,417,799	11.9
Kentucky.....	434	500	54,004	69,155,096	95,647,018	9.9
Alabama.....	157	150	24,781	23,600,822	38,564,531	4.0
Ohio.....	536	561	21,730	24,440,839	36,916,271	3.8
Indiana.....	222	235	12,860	18,101,859	31,501,936	3.3
Colorado.....	178	176	10,420	15,700,860	26,553,407	2.7
Virginia.....	75	88	11,056	11,846,463	21,102,036	2.2
Wyoming.....	35	50	4,693	8,716,950	17,118,580	1.8
Utah.....	36	40	3,452	6,635,673	13,145,832	1.4
Iowa.....	167	172	5,942	7,820,575	11,832,816	1.2
Oklahoma.....	97	113	4,716	6,392,491	10,789,770	1.1
Copper	148	180	44,502	73,199,785	263,517,373	100.0
Arizona.....	63	68	15,504	26,947,217	113,080,541	40.2
Montana.....	7	26	10,508	18,731,854	50,154,473	17.7
Utah.....	9	10	3,160	5,455,417	46,227,987	16.3
Michigan.....	9	18	7,834	9,838,442	29,683,859	10.5
Nevada.....	13	13	2,698	4,885,398	19,984,910	7.0
New Mexico.....	14	14	2,258	3,409,479	13,293,420	4.7
Iron ore	180	208	28,516	40,905,190	197,934,548	100.0
Minnesota.....	75	85	10,078	16,038,428	125,333,930	63.5
Michigan.....	49	57	8,894	13,049,659	43,194,938	21.9
Alabama.....	13	18	5,336	5,037,402	11,777,914	6.0
Pennsylvania.....	4	5	680	968,847	4,515,586	2.3
Wisconsin.....	3	3	948	1,406,166	4,394,899	2.2
Limestone	1,107	1,256	32,300	33,188,304	117,257,784	100.0
Pennsylvania.....	201	213	6,048	7,783,473	19,124,040	16.3
Indiana.....	91	116	2,881	4,032,335	12,247,196	10.4
Ohio.....	110	114	2,660	3,406,670	12,091,055	10.3
New York.....	69	73	1,998	3,111,408	11,389,027	9.7
Michigan.....	14	16	1,566	2,308,115	11,059,922	9.4
Illinois.....	53	55	1,049	2,105,707	7,830,131	6.7
Missouri.....	73	79	2,350	2,433,447	6,175,012	5.3
Sand and gravel	957	1,166	15,994	22,779,884	102,811,914	100.0
New York.....	62	69	1,330	2,437,209	11,304,630	11.0
Pennsylvania.....	46	54	1,208	1,821,815	11,092,656	10.8
California.....	68	96	1,153	1,843,622	7,800,188	7.6
Michigan.....	57	68	1,022	1,408,293	7,030,350	6.9
Ohio.....	73	84	1,103	1,787,498	6,863,579	6.7
Illinois.....	61	62	800	1,390,045	5,576,819	5.5
Texas.....	41	55	1,354	1,458,700	5,424,804	5.3
Lead	155	171	14,007	22,917,435	67,561,778	100.0
Missouri.....	13	15	3,773	5,909,059	22,055,417	34.0
Idaho.....	28	32	3,189	5,787,889	17,400,861	25.8
Utah.....	29	34	4,053	6,691,787	17,240,862	25.5
Zinc	148	204	11,900	16,274,399	44,866,026	100.0
Oklahoma.....	57	87	4,117	5,509,272	16,518,953	36.8
Kansas.....	30	45	2,428	3,140,236	9,912,331	22.1
New Mexico.....	8	9	1,036	1,429,289	4,946,072	9.0
Sulphur and pyrites	9	10	2,199	3,482,606	37,126,148	100.0

TABLE 4.—PRODUCING ENTERPRISES—SUMMARY FOR LEADING INDUSTRIES AND STATES: 1929—Continued

INDUSTRY AND STATE	Number of enterprises	Number of mines or quarries	Wage earners (average for the year)	Wages	VALUE OF PRODUCTS	
					Amount	Per cent distribution
Granite	406	484	10,037	\$12,639,524	\$30,381,373	100.0
Massachusetts.....	38	39	1,554	2,624,198	5,394,350	17.8
Vermont.....	24	25	952	1,303,739	3,892,352	12.8
Minnesota.....	25	37	923	1,230,398	3,617,933	11.9
North Carolina.....	67	67	1,300	1,298,307	3,213,624	10.6
Georgia.....	28	30	1,265	1,033,884	2,201,313	7.2
Maine.....	30	30	881	1,188,248	2,155,640	7.1
Gold, lode	174	184	5,353	8,855,505	17,850,174	100.0
South Dakota.....	2	2	1,304	2,200,107	6,501,144	37.3
Colorado.....	44	53	1,497	2,418,321	4,057,060	23.0
California.....	58	58	1,627	2,483,693	3,940,925	22.3
Nevada.....	31	32	363	580,106	1,568,098	8.9
Gold, placer	32	37	573	970,010	3,779,241	100.0
California.....	22	27	491	839,212	3,460,595	91.8
Basalt	137	144	3,053	4,498,093	15,543,687	100.0
New Jersey.....	26	27	683	1,104,636	3,580,184	23.0
Connecticut.....	10	19	420	722,983	2,924,085	18.8
Pennsylvania.....	20	22	569	716,909	2,239,438	14.4
Massachusetts.....	14	16	366	618,783	2,191,366	14.1
Phosphate rock	26	33	3,201	3,303,940	13,043,769	100.0
Florida.....	11	18	1,936	2,180,750	9,714,645	74.5
Tennessee.....	12	12	1,189	1,010,322	3,128,760	24.0
Clay	199	236	4,139	3,757,993	10,753,445	100.0
Georgia.....	9	11	707	589,349	2,101,812	20.1
Pennsylvania.....	31	34	555	575,992	1,215,882	11.3
South Carolina.....	9	10	514	336,500	650,187	6.8
Missouri.....	21	29	314	320,512	916,532	8.5
New Jersey.....	17	19	328	371,311	801,528	7.5
Kentucky.....	9	11	210	153,112	601,682	6.4
Slate	120	130	4,098	4,884,038	10,486,390	100.0
Pennsylvania.....	33	33	1,951	2,352,550	4,330,001	41.3
Vermont.....	58	67	1,303	1,701,192	3,653,796	34.8
Stone, miscellaneous	204	234	1,841	2,405,906	8,475,008	100.0
California.....	40	64	491	802,430	3,780,013	44.7
Missouri.....	19	19	267	286,938	628,763	7.4
New York.....	15	15	96	139,207	593,467	7.0
Pennsylvania.....	30	30	168	210,360	568,783	6.7
Silver	67	74	2,693	4,326,719	8,467,263	100.0
Utah.....	11	11	939	1,623,964	3,305,749	39.1
Nevada.....	14	14	610	1,124,830	1,893,346	22.0
Montana.....	12	14	202	569,840	1,030,622	12.2
Marble	70	88	3,350	3,291,541	7,538,995	100.0
Tennessee.....	13	14	1,377	1,093,582	2,287,938	30.3
Vermont.....	9	23	658	785,579	1,829,315	24.3
Missouri.....	6	8	299	335,009	752,978	10.0
Georgia.....	5	5	286	234,623	740,737	9.0
Alabama.....	3	3	358	333,544	653,940	8.7
Minor metals¹	28	30	1,244	1,508,851	6,649,976	100.0
Sandstone	145	172	2,156	2,626,437	6,311,977	100.0
Pennsylvania.....	41	51	595	742,273	1,615,444	25.6
Ohio.....	14	17	447	520,032	1,186,128	18.8
California.....	14	15	164	256,562	787,680	12.5
New York.....	30	41	276	348,660	689,875	10.8

¹ Rewrite 9 enterprises: molybdenum, 2; titanium, 1; tungsten, 12; vanadium, 2.

TABLE 5.—PREVAILING HOURS OF LABOR—NUMBER OF PRODUCING ENTERPRISES AND NUMBER OF WAGE EARNERS, BY LEADING INDUSTRIES: 1929

[This table does not include data for 2,720 enterprises whose value of product was less than \$20,000 (such enterprises having been permitted to report on an abbreviated schedule which did not call for information pertaining to prevailing hours of labor), nor for 27 enterprises which employed no wage earners]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Wage earners (average for the year)	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Wage earners (average for the year)
All industries, total.....	7,388	792,395	Sand and gravel, total.....	657	15,994
Not reported.....	12	91	Under 25.....	1	
Under 25.....	130	10,475	25 and over but under 36.....	7	270
25 and over but under 36.....	257	40,457	36 and over but under 40.....	14	273
36 and over but under 40.....	59	5,704	40.....	2	
40.....	297	29,293	Over 40 but under 44.....	26	2,339
Over 40 but under 44.....	32	3,529	44 and over but under 48.....	2	
44 and over but under 48.....	331	22,977	48.....	123	1,273
48.....	3,124	528,304	Over 48 but under 54.....	63	634
Over 48 but under 54.....	393	15,969	54 and over but under 63.....	668	11,366
54 and over but under 63.....	2,593	128,122	63 and over.....	71	2,189
63 and over.....	100	7,324	Lead, total.....	119	13,831
COAL:			25 and over but under 36.....	1	
Anthracite, total.....	198	142,801	48.....	49	2,034
Under 25.....	3	490	Over 48 but under 54.....	11	1,041
25 and over but under 36.....	4	452	54 and over but under 63.....	55	4,793
40.....	4	30	63 and over.....	3	463
44 and over but under 48.....	6	3,186	Zinc, total.....	138	11,861
48.....	151	138,226	36 and over but under 40.....	1	
Over 48 but under 54.....	3	11	Over 40 but under 44.....	1	
54 and over but under 63.....	26	2,430	44 and over but under 48.....	1	2,550
63 and over.....	2		Over 48 but under 54.....	3	
Bituminous, total.....	2,821	447,126	48.....	66	5,897
Under 25.....	111	9,911	54 and over but under 63.....	58	5,312
25 and over but under 36.....	226	39,691	63 and over.....	8	102
36 and over but under 40.....	46	5,587	Granite, total.....	308	6,806
40.....	221	26,842	Under 25.....	4	
Over 40 but under 44.....	19	3,075	25 and over but under 36.....	1	2,44
44 and over but under 48.....	89	11,514	36 and over but under 40.....	4	
48.....	1,941	320,718	Over 40 but under 44.....	2	2,97
Over 48 but under 54.....	27	3,672	40.....	17	595
54 and over but under 63.....	138	25,755	44 and over but under 48.....	110	4,239
63 and over.....	3	300	48.....	75	2,326
Copper, total.....	101	44,234	Over 48 but under 54.....	22	671
25 and over but under 36.....	1		54 and over but under 63.....	73	1,334
44 and over but under 48.....	1	2,255	Gold, Iode, total.....	118	5,079
Over 48 but under 54.....	6		Under 25.....	1	
48.....	41	24,416	48.....	47	2,071
54 and over but under 63.....	52	18,593	Over 48 but under 54.....	5	326
Limestone, total.....	1,018	31,578	54 and over but under 63.....	59	2,782
Under 25.....	1		63 and over.....	1	
25 and over but under 36.....	6	2,118	Clay, total.....	197	4,139
36 and over but under 40.....	2		Under 25.....	2	
40.....	12	450	25 and over but under 36.....	3	278
Over 40 but under 44.....	2		36 and over but under 40.....	1	
44 and over but under 48.....	21	2,307	40.....	3	
48.....	127	4,052	Over 40 but under 44.....	1	2,98
Over 48 but under 54.....	98	2,891	44 and over but under 48.....	12	281
54 and over but under 63.....	724	22,161	48.....	78	744
63 and over.....	25	999	Over 48 but under 54.....	20	311
Iron ore, total.....	180	28,516	54 and over but under 63.....	67	1,710
Not reported.....	1		63 and over.....	10	917
40.....	4	2,424	Slate, total.....	100	4,027
Over 40 but under 44.....	1		Not reported.....	12	91
44 and over but under 48.....	5	974	40.....	2	
48.....	37	15,193	44 and over but under 48.....	12	2,025
Over 48 but under 54.....	8	307	48.....	4	52
54 and over but under 63.....	74	11,648	Over 48 but under 54.....	51	2,028
63 and over.....	2		54 and over but under 63.....	17	2,931
			63 and over.....	2	

¹ Data for 1 small iron-ore enterprise for which the number of hours was not reported, included in the all-industry summary with industries operating 40 hours per week to avoid disclosure of figures for this enterprise.

² Combined to avoid disclosing, exactly or approximately, data reported by individual enterprises.

ABSTRACT OF THE CENSUS

TABLE 5.—PREVAILING HOURS OF LABOR—NUMBER OF PRODUCING ENTERPRISES AND NUMBER OF WAGE EARNERS, BY LEADING INDUSTRIES: 1929—Continued

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Wage earners (average for the year)	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Wage earners (average for the year)
Marble, total.....	63	3,308	Silver, total.....	60	2,451
25 and over but under 36.....	1	} 2,217	Under 25.....	1	} 90
36 and over but under 40.....	1		48.....	11	
44 and over but under 48.....	5		54 and over but under 63.....	36	} 2,361
48.....	10	63 and over.....	2		
Over 48 but under 54.....	7	94	Gypsum, total.....	60	2,078
54 and over but under 63.....	38	584	Under 25.....	1	} 80
63 and over.....	1	} 2,413	25 and over but under 36.....	2	
Phosphate rock, total.....	28	3,201	40.....	3	} 180
44 and over but under 48.....	4	434	44 and over but under 48.....	1	
48.....	4	} 193	48.....	20	} 650
Over 48 but under 54.....	1		Over 48 but under 54.....	3	
54 and over but under 63.....	15	} 2,574	54 and over but under 63.....	28	} 1,055
63 and over.....	2		63 and over.....	2	
Basalt, total.....	127	3,016	Sandstone, total.....	123	2,068
40.....	3	} 2,127	Under 25.....	1	} 137
Over 40 but under 44.....	1		40.....	4	
44 and over but under 48.....	1	406	Over 40 but under 44.....	1	} 344
48.....	26	73	44 and over but under 48.....	14	
Over 48 but under 54.....	9	2,310	48.....	28	} 309
54 and over but under 63.....	82	91	Over 48 but under 54.....	7	
63 and over.....	5		54 and over but under 63.....	66	} 1,107
			63 and over.....	2	

* Combined to avoid disclosing, exactly or approximately, data reported by individual enterprises.

TABLE 6.—WAGE EARNERS IN PRODUCING ENTERPRISES, BY MONTHS AND BY INDUSTRIES: 1929

The month of maximum employment is indicated by bold-face figures and that of minimum employment by italic figures)

INDUSTRY	Average number employed during year	NUMBER EMPLOYED ON 15TH DAY OF MONTH OR NEAREST REPRESENTATIVE DAY					
		January	February	March	April	May	June
ALL INDUSTRIES, TOTAL	806,418	811,140	813,080	800,827	800,310	790,000	783,466
COAL:							
Anthracite.....	142,801	161,788	147,181	130,468	145,788	144,770	132,159
Bituminous.....	458,732	479,103	482,906	474,797	444,051	435,012	432,522
META LS:							
Copper.....	44,502	42,375	43,023	45,569	46,837	46,350	44,005
Iron ore.....	28,516	25,649	20,114	20,633	23,030	20,350	30,278
Lead.....	14,007	13,825	18,480	13,700	13,791	13,878	14,203
Zinc.....	11,900	11,053	10,032	11,050	12,540	12,194	12,588
Gold, lode.....	5,353	5,139	4,180	5,198	5,332	5,407	5,402
Silver.....	2,592	2,524	2,673	2,525	2,555	2,504	2,672
Gold, placer.....	6,878	552	544	552	623	587	538
Mercury.....	1,020	385	902	804	936	985	1,090
Manganese.....	1,354	327	345	346	353	370	373
Minor metals ¹	1,244	1,110	1,105	1,133	1,156	1,205	1,305
STONE:							
Limestone.....	32,300	24,507	25,452	20,200	33,130	35,925	36,890
Granite.....	10,037	8,406	8,457	9,407	10,134	10,827	11,078
Basalt.....	3,053	2,032	2,127	2,646	3,181	3,457	3,530
Slate.....	4,098	4,195	4,207	4,288	4,098	4,177	4,222
Marble.....	3,350	3,243	3,220	3,260	3,323	3,443	3,421
Sandstone.....	2,156	1,312	1,202	1,687	2,526	2,577	2,666
Miscellaneous.....	1,841	1,338	1,286	1,514	1,720	1,870	2,080
OTHER NONMETALS:							
Abrasive materials ²	462	319	367	370	441	490	525
Asbestos.....	195	201	160	237	241	246	192
Asphalt and bituminous rock.....	1,123	861	882	1,277	1,302	1,360	1,448
Barite.....	844	831	800	847	803	832	851
Clay.....	4,139	4,024	4,016	4,181	4,221	4,238	4,201
Feldspar.....	598	673	558	620	547	650	665
Fluorspar.....	1,053	1,080	1,026	1,080	1,134	1,191	1,100
Fuller's and filtering earths.....	991	983	964	881	920	1,006	923
Gypsum.....	2,078	2,070	1,952	2,035	2,211	2,230	2,184
Magnesite.....	351	270	268	278	330	355	364
Mica.....	226	184	183	230	234	240	230
Millstones and pulpstones.....	164	120	132	141	161	175	207
Phosphate rock.....	3,201	3,142	3,220	3,172	3,202	3,142	3,164
Sand, glass.....	1,030	1,035	1,038	1,038	1,061	1,059	1,065
Sand, molding.....	1,037	532	556	766	1,037	1,144	1,238
Sand and gravel.....	15,994	11,517	11,630	13,354	16,716	17,077	18,367
Silica ³	1,433	1,300	1,284	1,354	1,463	1,430	1,490
Sulphur and pyrites.....	2,199	1,086	2,022	1,971	2,048	2,450	2,305
Talc and soapstone.....	550	522	518	517	519	553	559
Miscellaneous minerals ⁴	305	260	288	294	304	316	300

¹ Bauxite, molybdenum, titanium, tungsten, vanadium.² Emery, garnet and industrial sapphires and diamonds; grinding pebbles and tube-mill lining; grindstones, oilstones, whetstones, soythstones, and rubbing stones; pumice and volcanic ash (pumicite).³ Diatomaceous earth, ganister, quartz, quartzite, silica rock, silica sand, siliceous mica schist, tripoli.⁴ Borates, cyanite, graphite, lithium minerals (amblygonite, lepidolite, and spodumene), mineral pigments, tantalum, vermiculite.

TABLE 6.—WAGE EARNERS IN PRODUCING ENTERPRISES, BY MONTHS AND BY INDUSTRIES: 1929—Continued

[The month of maximum employment is indicated by bold-face figures and that of minimum employment by *italic* figures]

INDUSTRY	NUMBER EMPLOYED ON 15TH DAY OF MONTH OR NEAREST REPRESENTATIVE DAY						Per cent minimum is of maximum
	July	August	September	October	November	December	
ALL INDUSTRIES, TOTAL.....	782,556	805,132	814,560	827,684	824,005	808,480	94.5
COAL:							
Anthracite.....	<i>127,103</i>	140,835	144,105	146,303	146,792	147,241	83.7
Bituminous.....	436,280	445,179	455,887	468,471	474,072	470,444	89.6
METALS:							
Copper.....	44,714	43,776	43,201	44,456	44,924	42,468	90.4
Iron ore.....	30,223	30,300	29,984	29,400	28,104	20,016	84.7
Lead.....	14,226	14,370	14,270	14,101	14,263	13,980	93.8
Zinc.....	12,327	12,611	12,380	12,593	11,739	9,895	78.2
Gold, lode.....	5,634	5,402	5,394	5,437	5,340	5,382	92.6
Silver.....	2,897	2,644	2,052	2,082	2,678	2,448	90.8
Gold, placer.....	596	586	577	574	580	577	87.3
Mercury.....	1,103	1,147	1,177	1,128	1,124	1,064	75.2
Manganese.....	873	350	340	356	353	353	87.7
Minor metals ¹	1,370	1,351	1,320	1,272	1,206	1,273	80.7
STONE:							
Limestone.....	37,010	37,071	35,442	34,722	31,527	26,621	66.1
Granite.....	11,028	11,164	10,780	10,577	9,873	8,654	75.3
Basalt.....	3,503	3,546	3,511	3,374	3,161	2,631	58.2
Slate.....	4,048	4,093	4,093	4,045	3,912	3,814	89.4
Marble.....	3,424	3,528	3,500	3,410	3,258	3,157	88.0
Sandstone.....	2,662	2,601	2,552	2,491	2,078	1,407	47.9
Miscellaneous.....	2,192	2,274	2,232	2,180	1,920	1,456	56.6
OTHER NONMETALS:							
Abrasive materials ²	519	522	531	520	467	430	65.7
Asbestos.....	194	206	174	164	165	163	65.0
Asphalt and bituminous rock.....	1,436	1,483	1,070	941	805	670	46.9
Barite.....	888	886	865	824	760	753	83.4
Clay.....	4,180	4,157	4,120	4,165	4,117	4,020	94.7
Feldspar.....	681	655	593	597	537	544	77.7
Fluorspar.....	1,055	1,102	1,038	975	972	869	73.0
Fuller's and filtering earths.....	1,044	1,051	1,012	1,023	1,057	1,031	83.3
Gypsum.....	2,184	2,239	2,118	2,113	1,913	1,692	75.6
Magnesite.....	407	410	403	396	371	351	65.4
Mica.....	239	248	248	245	247	176	70.0
Millstones and pulpstones.....	197	199	193	170	154	116	56.0
Phosphate rock.....	3,211	3,297	3,412	3,075	3,188	3,184	90.1
Sand, glass.....	1,023	1,034	1,040	1,007	988	960	90.7
Sand, molding.....	1,263	1,235	1,291	1,279	1,185	842	41.2
Sand and gravel.....	18,676	18,677	18,383	18,013	15,812	12,768	60.8
Silica ³	1,543	1,555	1,502	1,458	1,404	1,360	82.4
Sulphur and pyrites.....	2,328	2,347	2,170	2,120	2,052	1,991	74.4
Talc and soapstone.....	553	552	568	587	574	504	88.1
Miscellaneous minerals ⁴	322	327	330	311	321	309	78.8

¹ Bauxite, molybdenum, titanium, tungsten, vanadium.² Emery; garnet and industrial sapphires and diamonds; grinding pebbles and tube-mill lining; grindstones, oilstones, whetstones, scythestones, and rubbing stones; pumice and volcanic ash (pumicite).³ Diatomaceous earth, ganister, quartz, quartzite, silica rock, silica sand, siliceous mica schist, tripoli.⁴ Borates, cyanite, graphite, lithium minerals (amblygonite, lepidolite, and spodumene), mineral pigments, tantalum, vermiculite.

TABLE 7.—CONSUMPTION OF FUEL AND ELECTRIC ENERGY, BY INDUSTRIES: 1929

[This table does not include data for enterprises whose value of product was less than \$20,000. Such enterprises were permitted to report on an abbreviated schedule which did not call for information pertaining to fuel and electric energy consumed. The combined value of products represented by these enterprises was less than 1 per cent of the total for all mining and quarrying industries.]

INDUSTRY	COAL		Coke	Fuel oils	Gasoline and kerosene	Natural gas ¹	ELECTRIC ENERGY	
	Anthracite	Bituminous					Purchased	Generated by enterprises reporting
	Long tons	Short tons	Short tons	Thousand gallons	Thousand gallons	Million cu. ft.	Thousand kw.-hrs.	Thousand kw.-hrs.
All industries, total.....	5,223,195	8,325,007	136,898	189,995	16,589	25,598	5,339,178	2,090,812
Coal:								
Anthracite.....	5,044,089	28,893		37	92		470,248	478,420
Bituminous.....		4,524,467	30,801	712	755	1,203	2,044,349	404,541
Copper.....	134	1,006,821	7,869	89,614	421		765,119	734,614
Iron ore.....	52,448	804,815	85,953	2,300	507	2	375,686	99,735
Lead.....	4,760	151,059	382	971	108	132	447,702	50,718
Zinc.....	59,783	40,859	15	2,021	282	781	106,949	54,740
Gold, lode.....	5	119,278	208	500	136	6	52,428	58,637
Gold, placer.....		140			4		67,618	216
Limestone.....	44,000	805,238	4,574	0,179	3,617	118	294,931	37,037
Granite.....	5,401	79,454	245	1,449	680	14	60,884	943
Basalt.....	1,000	53,934	702	527	555		39,746	
Phosphate rock.....		71,979	2	24,158	102		109,003	50,792
Sand and gravel.....	3,804	601,588	133	16,911	5,812	1,135	237,879	7,595
Sulphur and pyrites.....		328		6,109	20	23,073	2,735	15,454
Other industries.....	6,703	550,714	6,522	19,491	3,495	960	230,251	23,135

¹ Figures include data for 111,000,000 cubic feet of manufactured gas consumed in industries as follows: Coal, bituminous, 54,000,000; iron ore, 2,000,000; sand and gravel, 53,000,000.

² Includes less than 1,000,000 cubic feet of manufactured gas.

TABLE 8.—CONSUMPTION OF FUEL AND ELECTRIC ENERGY, BY STATES: 1929

[See headnote, Table 7]

STATE	COAL		Coke	Fuel oils	Gasoline and kerosene	Natural gas ¹	ELECTRIC ENERGY	
	Anthracite	Bituminous					Purchased	Generated by enterprises reporting
	Long tons	Short tons	Short tons	Thousand gallons	Thousand gallons	Million cu. ft.	Thousand kw.-hrs.	Thousand kw.-hrs.
United States, total.....	5,223,195	8,325,007	136,898	189,995	16,589	25,598	5,339,178	2,090,812
Alabama.....		295,843	18,430	100	37		234,765	49,142
Arizona.....	77	4,124	357	87,524	335		132,244	451,024
California.....	7	2,816		13,102	1,346	397	134,572	2,596
Colorado.....		289,954	63	133	101	4	93,207	16,587
Florida.....		36,386		26,301	412		103,917	52,209
Illinois.....	1,360	1,160,205		725	772		184,265	41,567
Indiana.....		458,842		102	311		103,570	3,027
Kentucky.....		541,148	750	224	225	102	175,731	55,820
Michigan.....	845	1,002,107	2,004	1,040	780		174,004	222,403
Minnesota.....	115	469,807	28,280	465	435		107,430	4,421
Missouri.....	7	245,093	96	1,063	415	11	206,835	71,932
Montana.....	110	138,104	40	220	115		317,875	3,515
Nevada.....	7	114,931	347	2,464	198		43,231	77,000
New Mexico.....		239,043		1,321	69		16,324	110,852
New York.....	12,465	128,517	982	1,242	1,280	1	98,356	7,654
Ohio.....	380	380,000	405	928	251	20	125,150	8,172
Pennsylvania.....	5,128,919	1,307,243	22,469	2,329	1,548	109	1,270,191	600,581
Texas.....	903	54,082	50	12,343	802	23,258	17,000	19,402
Utah.....	38	100,744	4,042	357	183		468,894	661
West Virginia.....		567,407		76	75	185	538,108	113,530
Other States.....	77,927	1,287,396	56,215	17,107	5,637	1,549	777,294	160,233

¹ Figures include data for 111,000,000 cubic feet of manufactured gas, consumed in States as follows: Texas, 35,000,000; West Virginia, 14,000,000; other States, 62,000,000.

TABLE 9.—DETAILED STATISTICS, BY INDUSTRIES: 1929

INDUSTRY	Number of enterprises	Number of mines and quarries	PERSONS ENGAGED IN INDUSTRY					PRINCIPAL EXPENSES OF OPERATION AND DEVELOPMENT	
			Total (all classes)	Proprietors and firm members	Principal salaried officers of corporations ¹	Other salaried officers and employees ¹	Wage earners (average for the year)	Total	Salaries and wages
All industries, total.	10, 135	11, 602	359, 346	4, 897	5, 600	42, 431	806, 418	1,045, 129, 163	24, 012, 377
COAL:									
Anthracite.....	198	4 303	150, 494	38	163	7, 402	142, 801	313, 400, 530	854, 010
Bituminous.....	4, 076	5, 620	432, 541	2, 933	2, 082	18, 144	458, 732	770, 236, 811	9, 998, 679
METALS:									
Copper.....	143	180	48, 043	76	62	3, 403	44, 502	145, 163, 728	332, 961
Iron ore.....	180	208	30, 707	9	22	2, 160	28, 610	76, 097, 356	95, 470
Lead.....	155	171	15, 004	53	72	872	14, 007	41, 287, 387	370, 344
Zinc.....	148	204	12, 709	25	74	800	11, 900	30, 593, 469	379, 383
Gold, lode.....	174	184	5, 885	89	71	372	5, 353	15, 724, 187	165, 085
Silver.....	67	74	2, 838	25	45	175	2, 503	7, 499, 442	165, 325
Gold, placer.....	32	37	680	18	22	68	578	2, 427, 091	70, 110
Mercury.....	40	40	1, 127	10	10	72	1, 029	2, 381, 345	60, 000
Manganese.....	19	21	303	4	11	24	354	690, 744	45, 954
Minor metals, total.....	26	30	1, 419	4	16	155	1, 244	4, 015, 174	226, 307
Bauxite.....	9	11	679	1	7	69	602	1, 189, 405	60, 870
Other ²	17	10	740	3	9	80	642	2, 825, 790	159, 518
STONE:									
Limestone.....	1, 167	1, 250	35, 582	497	471	2, 314	32, 309	75, 933, 430	2, 334, 381
Granite.....	406	434	11, 191	279	229	646	10, 037	20, 047, 440	1, 106, 281
Basalt.....	137	144	3, 439	51	86	249	3, 053	8, 680, 660	385, 420
Slate.....	120	130	4, 460	86	83	183	4, 098	6, 917, 871	269, 085
Marble.....	70	88	3, 594	7	44	103	3, 350	4, 988, 260	180, 859
Sandstone.....	145	172	2, 466	84	51	175	2, 156	4, 581, 214	190, 010
Miscellaneous.....	204	234	2, 244	161	35	207	1, 841	5, 098, 402	122, 560
OTHER NONMETALS:									
Abrasive materials ³	30	36	533	8	12	51	462	904, 004	69, 694
Asbestos.....	11	11	211	-----	-----	16	195	348, 580	-----
Asphalt and bituminous rock.....	21	25	1, 307	1	39	144	1, 123	2, 610, 060	280, 305
Barite.....	42	44	898	9	4	41	844	1, 062, 721	24, 800
Clay.....	199	236	4, 500	72	85	204	4, 139	6, 833, 353	274, 370
Feldspar.....	51	58	695	10	17	70	598	1, 047, 663	55, 378
Fluorspar.....	28	36	1, 184	13	13	105	1, 053	2, 222, 333	62, 983
Fuller's and filtering earths.....	22	24	1, 006	-----	21	84	991	2, 379, 008	98, 537
Gypsum.....	60	63	2, 214	2	10	124	2, 078	4, 167, 010	31, 367
Magnesite.....	5	5	378	-----	6	21	351	1, 160, 062	25, 900
Mica.....	24	32	250	1	8	15	220	354, 225	31, 325
Millstones and pulpstones.....	14	14	194	3	9	18	104	384, 817	30, 800
Phosphato rock.....	20	33	3, 400	2	5	232	3, 201	7, 550, 204	52, 421
Sand, glass.....	25	32	1, 125	-----	25	70	1, 030	2, 868, 504	117, 110
Sand, molding.....	90	128	1, 250	19	60	140	1, 037	2, 079, 458	306, 303
Sand and gravel.....	957	1, 165	19, 915	249	968	2, 704	15, 094	54, 678, 510	4, 827, 487
Silica ⁴	70	73	1, 657	8	22	194	1, 433	3, 099, 537	70, 230
Sulphur and pyrites.....	9	10	2, 505	1	8	207	2, 199	12, 261, 745	60, 300
Talc and soapstone.....	25	28	632	-----	23	59	550	1, 508, 062	88, 546
Miscellaneous minerals ⁵	19	19	343	-----	10	28	305	637, 683	18, 516

See footnotes at end of table.

TABLE 9.—DETAILED STATISTICS, BY INDUSTRIES: 1929—Continued

INDUSTRY	PRINCIPAL EXPENSES OF OPERATION AND DEVELOPMENT—continued						Expenditures for development (included in principal expenses)
	Salaries and wages—Con.			Cost of supplies, fuel, and purchased electric energy			
	Other salaried officers and employees ¹	Wage earners	Contract work	Supplies	Fuel	Purchased electric energy	
All industries, total.	97,537,583	1,091,936,846	17,066,464	293,598,383	49,146,531	71,799,087	76,488
COAL:							
Anthracite.....	18,481,914	229,967,069	6,801,808	43,307,491	7,419,721	6,508,527	7,902
Bituminous.....	38,841,351	574,800,072	1,880,027	106,438,396	7,529,305	50,739,331	16,046
METALS:							
Copper.....	9,733,393	73,199,785	2,594,908	43,995,395	9,210,052	6,027,234	22,151
Iron ore.....	5,042,814	40,906,190	1,553,134	18,561,157	5,332,103	4,007,488	9,880
Lead.....	2,175,800	22,917,455	1,032,085	10,377,797	980,700	3,733,230	5,006
Zinc.....	2,127,881	16,274,339	621,478	7,995,835	855,305	2,369,198	2,506
Gold, lode.....	906,162	8,055,505	550,148	4,112,499	430,181	832,617	3,739
Silver.....	442,193	4,326,719	137,070	1,820,829	121,098	484,708	1,002
Gold, placer.....	153,731	970,010	1,708	590,173	1,421	603,933	79
Mercury.....	159,798	1,383,003	15,202	464,047	229,844	68,351	400
Manganese.....	42,141	362,302	5,824	139,510	32,208	38,739	40
Minor metals, total.	371,018	1,506,851	80,490	1,416,575	108,872	208,071	370
Bauxite.....	151,805	512,006	82,243	216,234	121,793	37,845	13
Other ²	219,213	994,245	4,247	1,200,341	77,079	171,126	306
STONE:							
Limestone.....	4,854,432	39,188,364	418,760	20,735,739	3,006,670	4,795,934	1,459
Granite.....	1,481,864	12,639,624	39,273	3,618,511	652,642	1,109,351	1,093
Basalt.....	523,094	4,498,093	31,051	2,201,847	388,232	651,404	231
Slate.....	410,919	4,884,038	20,574	602,441	192,247	441,067	134
Marble.....	393,384	3,207,641	13,225	663,619	159,830	337,793	298
Sandstone.....	331,934	2,626,437	47,505	983,294	173,262	222,898	270
Miscellaneous.....	443,123	2,405,906	52,050	1,628,998	183,576	257,213	223
OTHER NONMETALS:							
Abrasive materials ³	98,794	491,484	37,358	144,554	50,797	7,343	67
Asbestos.....	34,280	236,739	2,000	36,201	20,766	12,500	93
Asphalt and bituminous rock.....	299,258	1,254,835	84,273	517,712	138,500	33,733	39
Barite.....	79,915	648,483	21,434	164,822	57,576	75,680	12
Clay.....	517,005	3,767,998	20,058	1,498,092	624,782	244,548	40
Feldspar.....	128,547	526,899	14,240	239,297	21,398	61,909	32
Flintspar.....	226,934	1,112,322	10,540	626,500	153,448	23,606	167
Fuller sandfiltering earths.....	204,330	853,228	350,979	425,011	385,350	61,577	90
Gypsum.....	275,292	2,627,733	7,004	794,733	130,504	284,077	127
Magnesite.....	62,391	465,930	65,070	282,178	231,375	56,092	24
Mica.....	20,868	195,142	-----	65,474	17,005	17,811	14
Millstones and pulp stones.....	66,466	221,318	-----	42,841	3,700	10,692	8
Phosphate rock.....	655,598	3,365,940	20,630	1,542,837	891,358	1,092,004	190
Sand, glass.....	100,590	1,313,593	15,000	676,293	282,405	304,663	50
Sand, molding.....	300,116	1,290,864	121,448	363,738	730,559	126,643	12
Sand and gravel.....	5,918,757	22,779,984	324,718	11,016,072	3,689,503	4,921,396	-----
Silica ⁴	461,617	1,677,407	3,596	614,133	442,817	139,716	51
Sulphur and pyrites.....	864,693	3,432,006	10,269	3,350,860	4,436,427	40,586	325
Talc and soapstone.....	128,371	1,155,355	10,795	530,177	28,939	99,339	57
Miscellaneous minerals ⁵	62,924	301,107	-----	167,030	37,060	50,657	45

See footnotes at end of table.

TABLE 9.—DETAILED STATISTICS, BY INDUSTRIES: 1929—Continued

INDUSTRY	Value of products	Machinery and other equipment purchased during the year (total cost)	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY					
			Aggregate horsepower	Prime movers				
				Total horsepower of prime movers	Steam engines		Steam turbines	
					Number	Horsepower	Number	Horsepower
All industries, total.	<i>Dollars</i> 2,392,931,178	<i>Dollars</i> 34,508,448	7,514,843	32,743,025	14,144	1,737,658	794	684,878
COAL:								
Anthracite.....	384,854,300	5,579,720	1,041,465	618,042	3,280	455,327	282	100,424
Bituminous.....	966,093,771	34,947,424	3,124,187	721,687	4,542	544,015	199	145,008
METALS:								
Copper.....	283,517,373	13,083,523	701,791	306,863	326	156,639	94	189,123
Iron ore.....	197,334,548	3,503,941	498,821	222,154	845	171,232	32	33,017
Lead.....	67,561,778	1,903,966	194,380	38,234	43	7,618	9	10,336
Zinc.....	44,800,026	1,847,978	163,367	55,829	33	6,019	7	18,252
Gold, lode.....	17,050,174	1,084,523	69,829	31,486	80	7,586	4	4,870
Silver.....	8,457,263	423,704	28,943	9,540	12	1,109	1	100
Gold, placer.....	3,779,241	359,497	20,280	589	16	389		
Mercury.....	2,820,166	618,185	5,025	3,119				
Manganese.....	1,184,561	12,441	177					
Minor metals, total.....	6,049,976	239,253	13,460	3,874	5	609		
Bauxite.....	2,238,892	95,650	5,711	2,124	3	350		
Other ^a	4,411,084	143,703	7,758	1,750	2	250		
STONE:								
Limestone.....	117,257,784	5,068,756	535,466	198,230	1,316	110,561	32	51,387
Granite.....	30,381,373	655,909	108,217	32,144	509	23,332	16	1,245
Basalt.....	15,543,687	900,467	63,881	18,775	143	11,407		
Slate.....	10,486,390	206,083	33,817	7,941	158	7,289	1	265
Marble.....	7,538,905	192,776	30,198	6,013	71	3,365	22	1,425
Sandstone.....	6,311,977	130,239	28,935	11,370	128	8,909	3	225
Miscellaneous.....	8,475,008	382,895	28,527	9,091	130	4,770		
OTHER NONMETALS:								
Abrasive materials ^a	1,411,284	26,692	3,828	2,927	36	1,341		
Asbestos.....	397,482	89,257	2,114	695	3	267		
Asphalt and bituminous rock.....	5,123,836	182,214	13,109	10,177	68	5,162		
Barite.....	1,801,314	154,055	6,066	2,698	18	698		
Clay.....	10,753,445	458,753	31,877	20,837	120	9,923	5	4,089
Feldspar.....	1,935,335	28,100	6,543	2,131	10	1,170		
Fluorspar.....	2,858,344	139,664	6,513	6,582	46	5,477		
Fuller's and filtering earths.....	4,811,629	98,012	8,221	6,775	22	2,725	3	1,400
Gypsum.....	5,740,188	577,546	26,498	5,348	10	1,599		
Magnesite.....	2,043,905	44,236	3,197	5,220	3	170		
Mica.....	516,305	6,406	1,721	732	4	165		
Millstones and pulpstones.....	620,835	11,136	2,517	614	11	364		
Phosphate rock.....	13,043,769	805,128	104,146	46,518	68	7,370	15	37,208
Sand, glass.....	5,359,216	433,067	13,215	2,193	14	805	3	270
Sand, molding.....	4,775,957	355,514	14,792	7,003	75	4,038	2	90
Sand and gravel.....	102,311,914	7,173,796	516,745	231,097	1,653	158,150	10	740
Silica ⁷	4,645,142	266,368	11,771	4,515	32	2,312		
Sulphur and pyrites.....	37,126,148	1,633,725	33,932	31,643	291	14,324	40	15,424
Talc and soapstone.....	2,687,953	35,399	10,530	3,937	11	535	5	20
Miscellaneous numerals ^a	3,502,876	66,719	3,978	610	6	540		

See footnotes at end of table.

TABLE 9.—DETAILED STATISTICS, BY INDUSTRIES: 1929—Continued

INDUSTRY	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY—continued						ELECTRIC MOTORS DRIVEN BY ENERGY GENERATED BY ENTERPRISES REPORTING		ELECTRIC GENERATORS	
	Prime movers—Continued				Electric motors driven by purchased energy					
	Internal-combustion engines		Water wheels and water turbines		Number	Horse-power	Number	Horse-power	Number	Kilo-watts
	Number	Horse-power	Number	Horse-power						
All industries, total.....	4,421	274,208	125	46,081	123,811	4,771,818	34,024	1,362,981	1,609	736,489
COAL:										
Anthracite.....	98	2,291			6,598	423,423	9,917	404,164	139	128,395
Bituminous.....	425	28,004	5	4,660	66,581	2,402,500	14,379	420,970	973	271,072
METALS:										
Copper.....	142	19,726	8	1,375	8,038	334,928	4,726	270,205	108	173,765
Iron ore.....	46	4,006	14	13,900	5,266	276,667	690	40,688	43	41,805
Lead.....	84	7,813	12	3,467	4,370	156,146	411	16,422	27	20,763
Zinc.....	263	30,768	5	800	2,577	107,528	740	17,206	25	19,687
Gold, lode.....	63	4,300	31	14,721	1,119	38,343	614	22,211	24	14,472
Silver.....	50	8,080		200	627	19,394	138	2,664	10	2,021
Gold, placer.....			4	200	423	19,691	5	25	3	80
Mercury.....	89	3,119			100	2,506	77	758	18	808
Manganese.....	16	177			102	2,165				
Minor metals, total.....	21	2,422	7	852	430	9,595	16	648	8	1,452
Bauxite.....	8	1,762	2	12	125	3,587			5	1,076
Other.....	13	660	5	840	305	6,008	16	648	3	377
STONE:										
Limestone.....	723	35,233	9	1,055	8,780	337,230	429	20,872	52	16,832
Granite.....	165	6,992	6	605	2,025	76,073	221	1,776	16	1,412
Basalt.....	152	7,308	2	60	898	45,106	8	350	3	62
Slate.....	6	331	1	56	1,155	25,876	3	75	1	100
Marble.....	21	1,038	1	185	898	24,185	6	172	2	45
Sandstone.....	89	2,236			517	17,565	12	204	3	142
Miscellaneous.....	86	4,315			629	19,436	6	113	1	75
OTHER NONMETALS:										
Abrasive materials.....	38	1,430	2	160	38	901	13	205	3	150
Asbestos.....	16	438			30	1,419	4	40	1	25
Asphalt and bituminous rock.....	74	5,015			67	2,932	59	3,133	13	1,785
Barite.....	36	1,050	1	160	96	3,368	8	113	4	185
Clay.....	178	5,745	2	180	718	11,040	86	1,011	9	802
Feldspar.....	47	986	1	375	150	4,012	26	381	2	350
Flourspar.....	56	705			23	331	120	2,830	14	2,003
Fuller's and filtering earths.....	31	2,050			94	1,440	171	2,000	8	1,376
Gypsum.....	43	3,719	1	30	792	21,150	107	1,930	12	1,233
Magnesite.....	3	60			143	2,977				
Mica.....	14	482	3	85	54	980	6	113	1	125
Millstones and pulpstones.....	5	250			64	1,903				
Phosphate rock.....	9	1,880			901	57,028	355	30,906	14	22,722
Sand, glass.....	24	1,118			448	11,022	24	716	3	360
Sand, molding.....	78	2,875			305	7,180	2	40	1	25
Sand and gravel.....	1,125	27,207			7,732	285,648	212	6,501	42	3,828
Silica.....	49	2,203			470	7,256	4	9	1	10
Sulphur and pyrites.....	36	1,895			106	2,289	426	13,528	18	8,202
Talc and soapstone.....	17	407	9	2,975	192	6,593	4	750	1	250
Miscellaneous minerals.....	3	70			189	8,368				

¹ Figures do not include data for salaried officers and employees of "Central Administrative" offices.

² Includes 203,825 horsepower reported for inactive prime movers.

³ Includes 112,384 kilowatts reported for inactive generators.

⁴ Colleries, 241; dredges, 42; washeries (culm-bank), 20.

⁵ Molybdenum, 2 enterprises; titanium, 1; tungsten, 12; vanadium, 2.

⁶ Emery, 2 enterprises; garnet and industrial sapphires and diamonds, 6; grinding pebbles and tubemill lining, 2; grindstones, oilstones, whetstones, scythestones, and rubbing stones, 13; pumice and volcanic ash (pumicite), 7.

⁷ Diatomaceous earth, 10 enterprises; ganister, 18; quartz, 9; quartzite, 2; silica rock, 6; silica sand, 14; siliceous mica schist, 13; tripoli, 8.

⁸ Borates, 2 enterprises; cyanite, 2; graphite, 5; lithium minerals (amblygonite, lepidolite, and spodumene), 4; mineral pigments, 4; tantalum, 1; vermiculite, 1.

TABLE 10.—PRODUCING ENTERPRISES—GENERAL STATISTICS IN DETAIL, BY STATES: 1929

STATE	Number of enterprises	Number of mines and quarries	PERSONS ENGAGED IN INDUSTRY					PRINCIPAL EXPENSES OF OPERATION AND DEVELOPMENT		
			Total (all classes)	Proprietors and firm members	Principal salaried officers of corporations ¹	Other salaried officers and employees ¹	Wage earners (average for the year)	Total	Salaries and wages	
									Principal officers of corporations ¹	
United States...		10, 195	11, 602	559, 346	4, 897	5, 600	42, 431	308, 418	Dollars 1, 045, 129, 153	Dollars 24, 012, 277
Alabama.....	222	255	33, 781	46	148	1, 009	31, 978	46, 183, 967	744, 905	
Arizona.....	133	138	18, 134	68	18	1, 481	16, 567	56, 616, 666	102, 725	
Arkansas.....	128	137	5, 453	72	00	252	5, 030	7, 537, 064	331, 391	
California.....	367	441	9, 323	157	100	968	8, 048	24, 943, 747	603, 068	
Colorado.....	314	343	15, 567	142	130	727	14, 532	33, 565, 310	610, 795	
Connecticut.....	52	53	951	10	28	88	816	2, 103, 870	128, 584	
Delaware and District of Columbia.....	5	0	119	-----	5	10	104	105, 348	15, 061	
Florida.....	66	74	3, 583	16	40	348	3, 173	8, 040, 664	210, 859	
Georgia.....	70	86	4, 032	31	67	207	3, 727	6, 758, 404	247, 852	
Idaho.....	60	65	4, 505	22	30	227	4, 226	12, 710, 804	123, 567	
Illinois.....	533	562	56, 392	303	349	2, 392	53, 378	100, 933, 397	1, 843, 131	
Indiana.....	399	452	18, 279	295	173	1, 069	16, 742	34, 446, 044	966, 517	
Iowa.....	240	247	7, 812	190	115	343	7, 164	12, 904, 590	890, 500	
Kansas.....	201	292	7, 938	249	75	317	7, 207	14, 603, 928	265, 051	
Kentucky.....	551	629	61, 241	210	480	2, 783	57, 818	85, 548, 850	1, 574, 537	
Louisiana and Mississippi.....	31	34	927	2	42	82	801	2, 116, 089	153, 700	
Maine.....	52	56	1, 284	29	21	04	1, 170	2, 218, 699	67, 527	
Maryland.....	112	130	4, 978	45	84	271	4, 578	8, 656, 736	307, 161	
Massachusetts.....	95	104	2, 740	46	66	200	2, 410	6, 578, 913	328, 037	
Michigan.....	158	191	22, 287	24	104	1, 330	20, 829	55, 501, 580	642, 478	
Minnesota.....	146	172	12, 018	27	69	1, 209	11, 613	37, 000, 341	342, 467	
Missouri.....	408	439	14, 689	241	181	849	13, 418	27, 876, 482	524, 093	
Montana.....	145	173	15, 595	86	48	804	14, 627	30, 806, 511	174, 697	
Nebraska.....	24	48	351	4	12	56	279	1, 068, 213	70, 900	
Nevada.....	104	107	5, 281	55	55	455	4, 716	10, 824, 017	273, 080	
New Hampshire.....	36	39	643	19	14	41	569	1, 176, 817	31, 055	
New Jersey.....	117	138	4, 222	26	110	456	3, 630	10, 128, 201	366, 727	
New Mexico.....	69	89	7, 522	35	17	484	6, 086	17, 610, 118	62, 645	
New York.....	261	298	7, 213	89	100	526	6, 432	20, 163, 410	1, 273, 458	
North Carolina.....	118	129	2, 843	77	45	155	2, 566	4, 308, 281	186, 187	
Ohio.....	801	864	28, 846	593	260	992	27, 001	45, 116, 584	1, 085, 804	
Oklahoma.....	217	281	11, 019	66	124	550	10, 270	23, 420, 418	740, 910	
Oregon.....	62	65	905	29	22	78	776	2, 187, 946	70, 140	
Pennsylvania.....	1, 814	2, 106	290, 787	913	913	12, 469	276, 492	551, 430, 423	3, 026, 053	
Rhode Island.....	14	14	301	11	12	22	256	674, 248	33, 530	
South Carolina.....	33	35	1, 423	7	27	91	1, 208	1, 951, 023	107, 160	
South Dakota and North Dakota.....	154	154	2, 968	126	21	160	2, 552	6, 571, 544	84, 570	
Tennessee.....	160	189	12, 848	51	110	742	11, 936	17, 410, 137	603, 680	
Texas.....	133	159	7, 870	46	127	662	6, 544	20, 679, 883	570, 001	
Utah.....	120	135	13, 008	29	87	806	12, 176	43, 674, 050	544, 323	
Vermont.....	105	129	3, 466	74	54	184	3, 154	6, 294, 280	312, 796	
Virginia.....	190	208	16, 091	59	118	652	15, 292	22, 276, 090	452, 472	
Washington.....	103	121	4, 110	33	50	200	3, 818	8, 841, 422	167, 420	
West Virginia.....	740	891	106, 747	109	581	4, 575	101, 422	176, 176, 036	2, 294, 709	
Wisconsin.....	147	161	3, 333	42	101	283	2, 907	7, 827, 897	333, 041	
Wyoming.....	56	73	5, 552	24	21	225	5, 282	13, 216, 290	86, 023	

¹ Figures do not include data for salaried officers and employees of "Central Administrative" offices.⁴ Includes 20 anthracite-culm washeries and 42 river dredges.

TABLE 10.—PRODUCING ENTERPRISES—GENERAL STATISTICS IN DETAIL, BY STATES: 1929—Continued

STATE	PRINCIPAL EXPENSES OF OPERATION AND DEVELOPMENT—continued						Expenses for development (included in principal expenses) Thousand dollars
	Salaries and wages—continued		Contract work	Cost of supplies, fuel, and purchased electric energy			
	Other salaried officers and employees	Wage earners		Supplies	Fuel	Purchased electric energy	
United States.....	Dollars 97,667,663	Dollars 1,091,989,848	Dollars 17,066,464	Dollars 288,568,383	Dollars 49,145,531	Dollars 71,769,087	70,488
Alabama.....	3,176,770	30,938,008	95,072	8,341,394	760,172	2,118,646	1,656
Arizona.....	3,030,453	28,290,779	1,162,201	17,434,045	4,145,087	1,560,776	9,836
Arkansas.....	478,180	4,017,309	106,600	1,080,489	276,460	337,686	220
California.....	2,340,000	12,270,081	534,593	6,312,482	768,802	2,048,962	1,922
Colorado.....	1,005,003	22,374,765	536,454	5,970,812	717,683	1,659,708	3,311
Connecticut.....	185,209	1,307,304	450	205,285	120,927	156,051	44
Delaware and District of Columbia.....	18,270	110,704	-----	22,403	0,040	10,870	-----
Florida.....	770,406	3,151,530	27,648	1,764,720	963,386	1,146,590	244
Georgia.....	430,544	2,944,210	346,259	974,064	515,873	268,780	171
Idaho.....	545,273	7,420,255	124,127	3,480,590	106,718	844,304	1,371
Illinois.....	4,808,820	73,777,064	272,685	14,270,664	2,461,224	3,409,809	2,789
Indiana.....	2,202,403	23,375,698	113,735	5,144,408	830,559	1,878,634	366
Iowa.....	710,580	0,317,398	7,644	1,600,507	1,642,449	542,404	336
Kansas.....	761,084	8,465,391	214,240	3,563,420	360,508	1,072,993	612
Kentucky.....	5,014,568	62,788,640	71,739	12,094,202	909,957	3,095,216	1,643
Louisiana and Mississippi.....	185,082	709,863	5,188	515,425	205,417	281,414	1
Maine.....	135,166	1,579,518	8,100	267,117	52,538	101,673	97
Maryland.....	543,912	4,815,794	397	2,376,924	276,138	335,410	115
Massachusetts.....	408,336	4,049,326	20,371	1,111,894	227,440	351,519	137
Michigan.....	3,138,260	28,806,325	79,057	15,779,147	4,428,842	2,627,471	5,030
Minnesota.....	2,883,318	18,180,303	1,480,266	9,454,474	2,785,705	1,873,823	5,360
Missouri.....	1,705,465	10,326,062	136,808	5,836,202	843,371	2,415,761	1,339
Montana.....	2,983,990	25,897,052	272,966	8,144,794	494,080	1,929,386	4,289
Nebraska.....	125,292	481,368	5,490	179,096	35,613	170,514	-----
Nevada.....	1,128,117	8,142,634	346,545	5,274,219	1,071,350	592,172	3,390
New Hampshire.....	79,693	772,709	6,288	190,009	46,308	50,665	9
New Jersey.....	1,080,595	5,400,075	143,483	1,959,779	585,428	562,114	105
New Mexico.....	1,224,141	10,118,023	116,882	4,389,541	1,300,022	368,264	2,109
New York.....	1,293,585	10,029,766	106,326	5,076,105	917,527	1,406,649	618
North Carolina.....	291,170	2,303,570	678	1,150,887	223,206	212,574	108
Ohio.....	2,105,262	31,350,700	169,453	6,970,667	1,056,825	2,377,873	321
Oklahoma.....	1,193,064	13,616,561	255,089	5,572,289	620,879	1,430,020	408
Oregon.....	184,632	1,172,421	95,019	420,572	166,747	89,415	283
Pennsylvania.....	30,149,293	403,657,708	7,488,808	77,699,969	11,502,611	17,105,021	13,618
Rhode Island.....	36,635	384,865	2,000	143,735	37,161	36,322	35
South Carolina.....	100,918	929,506	7,956	392,920	145,060	178,103	-----
South Dakota and North Dakota.....	489,025	3,892,504	8,746	1,764,464	238,441	96,794	573
Tennessee.....	1,434,404	10,915,521	143,197	2,819,436	608,341	985,499	711
Texas.....	1,620,106	7,609,258	50,835	5,475,452	4,978,370	380,361	545
Utah.....	2,108,045	21,264,248	2,051,903	13,559,522	409,921	3,706,898	7,742
Vermont.....	470,632	4,153,100	27,974	712,097	133,004	484,677	845
Virginia.....	1,413,581	14,837,666	17,039	3,692,399	302,227	1,561,659	843
Washington.....	467,293	6,008,067	21,551	1,394,019	360,413	391,159	380
West Virginia.....	10,135,959	128,906,460	204,306	25,208,630	923,310	8,412,372	2,678
Wisconsin.....	593,187	4,231,451	87,599	1,666,004	267,736	717,983	490
Wyoming.....	514,020	9,663,750	32,521	2,114,512	420,379	354,452	279

TABLE 10.—PRODUCING ENTERPRISES—GENERAL STATISTICS IN DETAIL, BY STATES: 1929—Continued

STATE	Value of products	Machinery and other equipment purchased during the year (total cost)	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY					
			Aggregate horsepower	Prime movers				
				Total horsepower of prime movers	Steam engines		Steam turbines	
					Number	Horsepower	Number	Horsepower
United States.....	Dollars 2,382,831,178	Dollars 84,508,448	7,514,849	2,743,025	14,144	1,737,658	794	884,876
Alabama.....	54,605,058	1,792,511	270,015	54,934	284	30,595	9	14,450
Arizona.....	110,477,630	7,247,585	202,428	154,894	97	30,373	17	104,043
Arkansas.....	11,367,754	618,958	37,624	14,390	131	10,762	—	—
California.....	38,645,880	1,787,736	165,879	26,306	146	9,839	1	20
Colorado.....	41,530,446	1,706,385	118,330	32,054	211	21,336	16	7,765
Connecticut.....	4,192,403	252,112	13,622	3,816	60	2,995	—	—
Delaware and District of Columbia.....	268,100	—	901	311	9	261	—	—
Florida.....	14,014,933	765,513	110,291	51,864	86	7,530	21	38,008
Georgia.....	9,611,219	187,744	35,515	18,292	107	6,823	7	8,558
Idaho.....	20,745,615	893,396	97,205	9,079	6	852	2	2,000
Illinois.....	132,948,261	8,239,736	439,462	184,273	1,040	141,081	36	31,981
Indiana.....	48,992,786	1,595,080	188,735	60,982	584	55,981	8	1,130
Iowa.....	10,910,280	423,601	54,902	17,675	388	15,019	—	—
Kansas.....	22,463,609	980,380	76,888	29,561	224	10,569	3	30
Kentucky.....	103,849,625	3,031,321	317,973	79,404	514	53,348	32	20,883
Louisiana and Mississippi.....	3,139,792	209,442	20,756	10,123	39	5,101	—	—
Maine.....	3,468,040	54,562	12,076	3,176	31	2,328	1	276
Maryland.....	11,122,195	457,887	34,066	12,960	149	17,114	4	150
Massachusetts.....	10,387,014	600,965	33,417	12,992	163	6,820	2	200
Michigan.....	95,261,833	3,244,270	395,723	243,270	405	148,671	34	74,115
Minnesota.....	132,400,530	2,610,345	298,741	119,805	617	104,776	21	2,407
Missouri.....	47,276,257	1,677,139	165,368	67,700	405	20,211	7	17,330
Montana.....	65,182,707	1,383,952	204,060	18,832	100	14,410	2	800
Nebraska.....	2,139,767	139,642	10,732	2,280	18	991	—	—
Nevada.....	26,658,631	2,042,221	73,395	44,013	32	5,818	5	24,065
New Hampshire.....	1,562,387	47,402	5,455	2,250	39	1,870	—	—
New Jersey.....	15,789,610	822,577	68,584	38,138	140	14,404	5	14,262
New Mexico.....	27,141,764	1,196,013	90,961	73,007	80	35,908	62	31,535
New York.....	36,045,204	1,709,064	145,995	60,113	337	38,523	5	179
North Carolina.....	5,981,293	126,135	22,348	10,544	156	7,649	—	—
Ohio.....	60,095,705	2,201,751	228,121	83,510	658	66,708	4	4,420
Oklahoma.....	33,193,080	950,411	106,345	37,507	151	13,000	—	—
Oregon.....	3,512,125	144,863	12,707	5,099	51	2,480	2	160
Pennsylvania.....	694,975,146	15,801,390	2,180,218	873,046	4,866	633,489	336	212,394
Rhode Island.....	809,381	10,751	4,237	1,322	14	525	0	450
South Carolina.....	3,092,967	152,708	18,470	4,059	41	2,407	—	—
South Dakota and North Dakota.....	10,827,367	111,016	35,969	27,612	106	8,741	2	3,069
Tennessee.....	24,180,449	1,101,064	86,257	30,434	240	21,946	20	5,015
Texas.....	49,753,382	2,531,838	82,014	62,278	512	20,106	54	10,560
Utah.....	83,098,020	4,063,420	180,321	5,600	38	4,205	—	—
Vermont.....	10,275,907	349,213	30,606	4,995	71	4,524	6	170
Virginia.....	29,540,524	1,143,027	111,921	15,435	162	12,350	2	460
Washington.....	13,365,010	489,683	47,702	10,351	60	6,311	—	—
West Virginia.....	223,930,754	8,271,684	670,544	107,923	898	67,494	38	82,119
Wisconsin.....	13,163,414	685,133	67,240	17,669	73	8,297	1	4,189
Wyoming.....	18,817,045	618,154	50,855	28,144	52	17,152	12	10,170

² Includes 203,825 horsepower reported for inactive prime movers.

TABLE 10.—PRODUCING ENTERPRISES—GENERAL STATISTICS IN DETAIL, BY STATES: 1929—Continued

STATE	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY—continued						ELECTRIC MOTORS DRIVEN BY ENERGY GENERATED BY ENTERPRISES REPORTING		ELECTRIC GENERATORS	
	Prime movers—Continued				Electric motors driven by purchased energy					
	Internal combustion engines		Water wheels and water turbines		Number	Horse-power	Number	Horse-power	Number	Kilo-watts
	Number	Horse-power	Number	Horse-power						
United States.....	4,421	274,208	126	46,081	123,811	4,771,818	34,024	1,352,981	1,609	739,489
Alabama.....	51	3,880	-----	-----	4,459	215,681	177	12,125	28	16,339
Arizona.....	171	19,578	-----	-----	1,320	47,534	2,840	167,436	70	100,153
Arkansas.....	47	3,635	2	12	881	23,225	-----	-----	6	1,065
California.....	297	15,060	12	1,381	3,901	129,573	56	965	12	1,221
Colorado.....	42	1,929	10	1,034	2,793	86,276	589	18,450	66	11,286
Connecticut.....	18	821	-----	-----	240	9,806	14	211	2	135
Delaware and District of Columbia.....	4	50	-----	-----	7	590	-----	-----	-----	-----
Florida.....	87	6,246	1	80	979	58,427	443	32,126	22	22,958
Georgia.....	45	2,511	2	400	498	17,223	144	2,375	10	2,129
Idaho.....	23	1,789	17	4,438	1,792	58,216	79	1,390	12	2,036
Illinois.....	174	10,311	-----	-----	7,169	255,189	3,175	78,497	172	46,454
Indiana.....	83	3,871	-----	-----	3,909	127,763	327	10,260	45	8,125
Iowa.....	93	2,666	-----	-----	1,152	37,227	42	1,658	10	1,190
Kansas.....	155	12,962	-----	-----	1,323	47,327	34	1,146	7	505
Kentucky.....	187	5,173	-----	-----	7,428	238,569	2,029	50,206	140	33,364
Louisiana and Mississippi.....	48	5,022	-----	-----	132	10,683	-----	-----	2	206
Maine.....	20	573	-----	-----	203	8,900	2	266	-----	-----
Maryland.....	36	1,666	1	40	692	21,040	104	2,259	10	1,600
Massachusetts.....	90	5,787	1	185	554	20,425	26	765	2	300
Michigan.....	119	6,594	14	13,900	2,885	152,453	1,691	98,450	66	69,883
Minnesota.....	66	3,287	3	335	2,940	97,936	329	3,894	12	4,215
Missouri.....	186	11,159	-----	-----	2,894	107,662	400	18,232	30	20,685
Montana.....	33	2,961	2	655	2,383	185,267	68	3,435	4	1,046
Nebraska.....	24	1,289	-----	-----	154	8,452	-----	-----	-----	-----
Nevada.....	118	13,430	3	700	846	26,382	569	25,826	25	26,989
New Hampshire.....	15	310	2	70	96	3,196	7	150	2	90
New Jersey.....	109	9,482	-----	-----	704	30,440	367	9,942	10	11,312
New Mexico.....	56	5,174	3	90	487	17,954	1,215	44,392	43	33,054
New York.....	188	8,416	10	2,995	2,416	95,822	105	4,091	19	7,247
North Carolina.....	45	1,965	6	630	334	11,804	91	1,500	14	1,424
Ohio.....	196	12,382	-----	-----	4,137	144,611	540	16,691	77	11,167
Oklahoma.....	199	23,407	-----	-----	1,880	68,838	203	4,931	9	5,475
Oregon.....	50	2,289	4	200	244	7,038	21	151	5	149
Pennsylvania.....	529	26,748	7	445	31,377	1,316,172	13,080	566,986	373	108,080
Rhode Island.....	14	347	-----	-----	79	2,915	-----	-----	-----	-----
South Carolina.....	39	1,652	-----	-----	317	14,411	-----	-----	1	3
South Dakota and North Dakota.....	47	2,771	9	12,500	292	8,357	407	16,136	15	12,102
Tennessee.....	61	3,473	-----	-----	1,526	55,823	69	2,917	8	2,255
Texas.....	279	16,603	-----	-----	941	20,636	556	17,632	43	10,778
Utah.....	43	1,364	2	40	6,016	174,712	4	280	8	689
Vermont.....	9	195	2	106	1,351	34,911	3	45	2	97
Virginia.....	54	2,185	1	500	2,562	96,486	101	3,064	15	1,647
Washington.....	65	3,405	7	635	988	37,351	20	311	10	818
West Virginia.....	66	3,810	3	4,500	14,810	562,621	2,787	91,914	160	54,032
Wisconsin.....	113	4,973	1	210	1,359	49,571	23	522	6	318
Wyoming.....	21	822	-----	-----	643	22,711	1,287	40,948	27	17,570

³ Includes 112,884 kilowatts reported for inactive generators.