

---

---

**REPORTS FOR STATES**

---

---

# ALABAMA

On the basis of the industries canvassed for 1929, Alabama ranked eleventh among the States in value of mineral products and fifth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the 1929 figures to exclude data for the sand and gravel industry, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 10.9 per cent less in 1929 than in 1919. This decrease is more than accounted for by the decline in the value of bituminous coal, for which comparative figures are given in Table 2. Other industries, taken as a whole, show a slight increase in the total value of products.

The corporation was the dominant form of organization among enterprises in the mining industries in Alabama in 1929. As shown in Table 3, corporations operated 80.2 per cent of all enterprises, employed 96.8 per cent of the wage earners, and produced 97.5 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in Alabama 65.8 per cent were in classes having not more than 100 wage earners. These enterprises employed 13.1 per cent of the total number of wage earners

and contributed 14.1 per cent of the total value of products.

The statistics for the number of hours in the working week for wage earners, given in Table 5, show that the "54 and over but under 63" class predominated, while the "44 and over but under 48" class ranked second. In the bituminous-coal industry 41.3 per cent of the wage earners were in the "54 and over but under 63" class. In the iron-ore industry nearly all of the wage earners were in this class.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 4 enterprises in the 10,000 to 24,999 horsepower group reported 67,485 horsepower, or 25.2 per cent, while all enterprises reporting 1,000 horsepower or more accounted for 235,154 horsepower, or 87.7 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The bituminous-coal industry ranked first in the State, accounting for 70.5 per cent of the total product. This industry, together with the iron-ore industry, produced 92.1 per cent of the total. Alabama ranked fifth among the States in 1929 in the bituminous-coal industry and third in the iron-ore industry.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (-)	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (-)
	1929		1919			1929		1919		
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>			
Number of enterprises <sup>3</sup> .....	222	212	264	-10.7						
Number of mines and quarries.....	255	242	348	-30.5						
Persons engaged, total.....	33,731	33,424	34,632	-3.5						
Proprietors and firm members.....	46	43	41	(4)						
Salaried employees.....	<sup>4</sup> 1,757	<sup>4</sup> 1,707	2,012	-15.2						
Wage earners (average for the year) <sup>4</sup> .....	31,978	31,674	32,570	-2.8						
Power equipment (total horsepower).....	270,615	265,666	145,775	82.2						
					Principal expenses: <sup>7</sup>					
					Salaries.....	\$3,021,675	\$3,781,291	\$3,084,834	-3.0	
					Wages.....	30,838,098	30,692,042	36,229,723	-15.3	
					Contract work.....	95,072	95,072	167,070	-43.1	
					Supplies and materials.....	8,341,394	8,240,921	7,480,310	10.2	
					Fuel.....	709,172	684,835	2,431,350	-71.8	
					Purchased electric energy.....	2,118,040	2,097,966	648,033	223.3	
					Value of products <sup>8</sup> .....	54,005,058	53,302,904	59,866,040	-10.9	

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

MINES AND QUARRIES—ALABAMA

TABLE 2.—SUMMARY FOR BITUMINOUS-COAL INDUSTRY: 1929 AND 1919

	1929	1919	Per cent of increase or decrease (-)		1929	1919	Per cent of increase or decrease (-)
Number of enterprises <sup>1</sup> .....	187	188	-15.5	Principal expenses—Continued.			
Number of mines.....	180	260	-30.8	Fuel.....	\$242,057	\$1,458,184	-83.4
Wage earners (average for the year) <sup>2</sup> .....	24,781	24,648	0.5	Purchased electric energy.....	\$1,563,984	\$472,100	229.1
Power equipment (total horsepower).....	136,873	67,039	92.0	Value of products, total.....	\$38,564,531	\$45,369,441	-15.0
Principal expenses: <sup>3</sup>				Coal:			
Salaries.....	\$2,757,324	\$2,900,075	-6.0	Quantity (tons, 2,000 pounds).....	18,189,000	15,411,000	18.0
Wages.....	\$23,066,802	\$28,327,420	-18.5	Value at mine.....	\$38,567,030	\$45,334,000	-16.1
Contract work.....	\$91,317	\$88,373	3.3	Other products.....	\$58,030	\$25,000	132.0
Supplies and materials.....	\$5,449,599	\$5,420,177	0.5				

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>3</sup> See GENERAL EXPLANATIONS—Expenses.  
<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	222	255	31,978	\$54,665,658	LIMESTONE, total.....	21	23	957	\$1,886,790
Corporations.....	178	209	30,952	53,282,843	Corporations.....	17	18	871	1,720,083
Other <sup>1</sup> .....	44	40	1,026	1,382,815	Other <sup>1</sup> .....	4	5	86	166,707
COAL, BITUMINOUS, total.....	157	180	24,781	38,564,531	SAND AND GRAVEL, total.....	10	13	304	1,302,754
Corporations.....	122	144	23,914	37,444,272	Corporations <sup>1</sup> .....	10	13	204	1,302,754
Other <sup>1</sup> .....	35	36	867	1,120,259	MARBLE, total.....	3	3	358	653,040
IRON ORE, total.....	13	18	5,336	11,777,914	Corporations.....	3	3	358	653,040
Corporations <sup>1</sup> .....	13	18	5,336	11,777,914					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.  
<sup>2</sup> Includes 1 other form of organization.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBER OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBER OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	222	255	31,978	\$30,038,008	\$54,665,658	LIMESTONE, total.....	21	23	957	\$841,965	\$1,886,790
1 to 5.....	34	34	99	89,918	218,150	1 to 5.....	2	2	64	60,208	178,182
6 to 20.....	51	52	575	536,253	1,035,465	6 to 20.....	5	6	215	183,171	403,393
21 to 50.....	29	30	1,022	784,380	1,729,019	21 to 50.....	6	6	678	680,586	1,305,245
51 to 100.....	32	35	2,495	2,234,089	4,719,469	51 to 100.....	7	8			
101 to 250.....	34	39	5,738	4,350,041	8,679,008	101 to 250.....	1	1			
251 to 500.....	30	45	10,653	10,607,032	17,267,249	MARBLE, total.....	3	3	358	333,544	653,040
501 to 1,000.....	8	12	5,148	5,311,039	10,556,710	51 to 100.....	2	2	358	333,544	653,040
1,001 to 2,500.....	4	7	6,248	6,623,756	10,430,500	101 to 250.....	1	1			
COAL, BITUMINOUS, total.....	157	180	24,781	23,066,802	38,564,531	SAND AND GRAVEL, total.....	10	13	304	245,066	1,302,754
1 to 5.....	27	27	77	69,016	131,743	1 to 5.....	1	1	107	105,158	444,076
6 to 20.....	30	30	321	293,354	483,518	6 to 20.....	4	4	197	130,908	858,678
21 to 50.....	17	17	625	441,839	825,176	21 to 50.....	2	3			
51 to 100.....	16	17	1,328	1,218,228	1,908,726	51 to 100.....	4	5			
101 to 250.....	30	35	4,019	4,203,186	7,241,781						
251 to 500.....	29	41	10,363	10,240,617	16,573,923						
501 to 1,000.....	5	9	7,188	7,200,662	11,860,686						
1,001 to 2,500.....	3	4									
IRON ORE, total.....	13	18	5,336	5,637,402	11,777,914						
6 to 20.....	1	1	360	316,255	701,464						
21 to 50.....	1	1									
51 to 100.....	4	4	738	686,015	1,488,825						
101 to 250.....	2	2									
251 to 500.....	1	4	4,238	4,735,182	9,587,686						
501 to 1,000.....	3	3									
1,001 to 2,500.....	1	3									

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

# MINES AND QUARRIES—ALABAMA

71

**TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Alabama was 55, distributed as follows: Coal, bituminous, 52; limestone, 1; sandstone, 1; stone, miscellaneous, 1. The combined value of products represented by these enterprises was \$333,022.]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
<b>ALL INDUSTRIES, total</b> <sup>1</sup> .....	167	200	31,055	\$30,015,713	\$54,176,730	<b>IRON ORE, total</b> .....	13	18	5,336	\$5,037,402	\$11,777,014
Under 25.....	5	5	565	378,820	619,085	Over 48 but under 54.....	2	2	5,336	5,037,402	11,777,014
25 and over but under 30.....	15	18	2,784	2,670,433	4,559,480	54 and over but under 63.....	11	16			
30 and over but under 40.....	9	11	1,344	1,140,190	2,091,100	<b>LIMESTONE, total</b> <sup>1</sup> .....	20	22	950	830,005	1,871,700
40.....	10	11	1,034	1,101,611	1,740,007	Over 48 but under 54.....	4	5	409	353,126	711,441
44 and over but under 48.....	17	18	4,001	4,318,295	6,989,835	54 and over but under 63.....	15	16			
48.....	24	27	2,743	2,339,092	4,120,897	<b>MARBLE, total</b> .....	3	3	368	333,544	653,040
Over 48 but under 54.....	20	27	2,084	2,836,354	4,910,335	Over 48 but under 54.....	1	1	368	333,544	653,040
54 and over but under 63.....	60	82	10,137	15,878,103	29,145,991	54 and over but under 63.....	2	2			
63 and over.....	1	1				<b>SAND AND GRAVEL, total</b> .....	10	13	304	245,000	1,302,754
<b>COAL, BITUMINOUS, total</b> <sup>1</sup> .....	105	128	24,471	23,385,886	38,113,314	44 and over but under 48.....	1	1	304	245,000	1,302,754
Under 25.....	5	5	565	378,820	619,085	54 and over but under 63.....	8	11			
25 and over but under 30.....	15	18	2,784	2,670,433	4,559,480	63 and over.....	1	1			
30 and over but under 40.....	9	11	1,344	1,140,190	2,091,100						
40.....	5	5	698	810,377	1,171,793						
44 and over but under 48.....	15	16	4,011	4,271,468	6,785,679						
48.....	18	21	2,031	2,221,922	3,932,635						
Over 48 but under 54.....	11	18	2,300	2,193,315	3,582,249						
54 and over but under 63.....	27	34	10,198	9,660,361	15,491,287						

<sup>1</sup> See headnote.

**TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929**

[This table does not include data for 55 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 detailed power-equipment information. Of the 167 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 10.]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—								
		Less than 25	25 to 50	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	5,000 to 9,999	10,000 to 24,999
Number of enterprises reporting power equipment <sup>1</sup> .....	167	3	17	24	10	20	37	17	7	4
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	208,081	24	941	4,363	6,020	20,640	61,625	55,503	50,481	67,485
Prime movers, total horsepower.....	54,336	22	584	1,161	1,625	4,870	10,880	5,880	12,485	17,200
Steam engines—										
Number.....	268		16	23	9	46	113	14	20	27
Horsepower.....	35,997		350	773	625	4,130	9,770	5,455	6,605	8,260
Steam turbines—										
Number.....	9						1		6	2
Horsepower.....	14,450						500		4,950	9,000
Internal-combustion engines—										
Number.....	51	2	0	13	6	7	8	2	4	
Horsepower.....	3,889	22	234	418	1,000	240	610	425	940	
Horsepower rating of inactive prime movers, included above.....	8,472			40		230	1,067	725	8,000	3,320
Electric motors driven by purchased energy—										
Number.....	4,368	1	24	130	153	457	1,153	1,198	632	619
Horsepower.....	213,745	2	357	3,202	5,295	10,270	50,780	49,683	37,950	50,195
Electric motors driven by energy generated by enterprises reporting:										
Number.....	177					2		81		68
Horsepower.....	12,125					170		2,078		4,070
Electric generators:										
Number.....	28				1		8		4	17
Kilowatts.....	16,330				235		512		777	7,665

<sup>1</sup> See headnote.

<sup>2</sup> See Table 8 for total horsepower rating of power equipment for all enterprises.

## MINES AND QUARRIES—ALABAMA

TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total..	31, 078	<b>32, 630</b>	<i>32, 020</i>	<b>32, 536</b>	<i>32, 406</i>	<b>31, 893</b>	<i>31, 820</i>	<b>31, 699</b>	<i>31, 633</i>	<b>31, 339</b>	<i>31, 588</i>	<b>31, 784</b>	<i>31, 713</i>	96.2
Coal, bituminous.....	24, 781	<b>25, 221</b>	<i>25, 210</i>	<b>24, 989</b>	<i>24, 727</i>	<b>24, 523</b>	<i>24, 569</i>	<b>24, 434</b>	<i>24, 410</i>	<b>24, 469</b>	<i>24, 743</i>	<b>25, 009</b>	<i>25, 074</i>	96.8
Iron ore.....	5, 336	<b>5, 071</b>	<i>5, 635</i>	<b>5, 600</b>	<i>5, 751</i>	<b>5, 415</b>	<i>5, 301</i>	<b>5, 252</b>	<i>5, 280</i>	<b>5, 037</b>	<i>5, 006</i>	<b>4, 979</b>	<i>4, 964</i>	85.3
Limestone.....	987	<b>974</b>	<i>1, 013</i>	<b>1, 009</b>	<i>985</i>	<b>968</b>	<i>984</i>	<b>996</b>	<i>975</i>	<b>929</b>	<i>918</i>	<b>882</b>	<i>844</i>	83.3
Marble.....	358	<b>364</b>	<i>361</i>	<b>361</b>	<i>354</i>	<b>355</b>	<i>361</i>	<b>358</b>	<i>365</i>	<b>369</b>	<i>348</i>	<b>353</b>	<i>353</i>	94.3
Sand and gravel.....	304	<b>307</b>	<i>214</i>	<b>287</b>	<i>306</i>	<b>333</b>	<i>343</i>	<b>354</b>	<i>356</i>	<b>332</b>	<i>321</i>	<b>307</b>	<i>307</i>	58.1
Miscellaneous minerals.....	87	<b>78</b>	<i>86</i>	<b>86</b>	<i>86</i>	<b>88</b>	<i>88</i>	<b>55</b>	<i>58</i>	<b>55</b>	<i>52</i>	<b>54</b>	<i>43</i>	54.5
Clay.....	65	<b>65</b>	<i>65</i>	<b>65</b>	<i>65</i>	<b>65</b>	<i>65</i>	<b>65</b>	<i>65</i>	<b>65</b>	<i>65</i>	<b>65</b>	<i>65</i>	95.5
Minor metals.....	36	<b>13</b>	<i>9</i>	<b>18</b>	<i>48</i>	<b>53</b>	<i>51</i>	<b>33</b>	<i>29</i>	<b>26</b>	<i>49</i>	<b>49</b>	<i>50</i>	17.0
Other industries.....	74	<b>37</b>	<i>33</i>	<b>81</b>	<i>83</i>	<b>83</b>	<i>87</i>	<b>92</b>	<i>95</i>	<b>86</b>	<i>86</i>	<b>85</b>	<i>85</i>	34.7

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. One of the "Other industries," however, was of greater importance in the State than one of the industries shown separately]

	Total	Coal, bituminous	Iron ore	Limestone	Sand and gravel	Marble	Clay	Miscellaneous minerals <sup>1</sup>	Minor metals <sup>2</sup>	Other industries <sup>3</sup>
Number of enterprises <sup>4</sup> .....	222	157	13	21	10	3	5	4	3	6
Number of mines and quarries.....	255	180	18	23	13	3	5	4	3	6
Persons engaged in industry, total (all classes).....	33, 781	28, 039	5, 674	1, 024	367	415	70	79	44	79
Proprietors and firm members.....	46	39	-----	2	3	-----	1	-----	1	-----
Principal salaried officers of corporations <sup>5</sup> .....	148	118	-----	2	11	8	1	6	-----	2
Other salaried officers and employees <sup>6</sup> .....	1, 609	1, 101	338	63	39	49	3	6	7	3
Wage earners (average for the year).....	31, 978	24, 781	5, 336	957	304	358	65	67	30	74
Principal expenses:										
Salaries and wages—										
Principal officers of corporations <sup>5</sup> .....	\$744, 905	\$572, 241	-----	\$8, 000	\$63, 800	\$60, 375	\$8, 490	\$10, 479	-----	\$22, 500
Other salaried officers and employees <sup>6</sup> .....	\$3, 178, 770	\$2, 185, 093	\$653, 235	\$118, 116	\$36, 534	\$108, 601	\$5, 303	\$8, 648	\$13, 940	\$4, 280
Wage earners.....	\$30, 933, 008	\$23, 696, 802	\$5, 637, 402	\$841, 965	\$245, 066	\$333, 644	\$58, 276	\$49, 106	\$36, 859	\$68, 988
Contract work.....	\$95, 072	\$91, 317	\$2, 479	\$1, 122	-----	-----	\$164	-----	-----	-----
Supplies.....	\$8, 341, 394	\$5, 449, 568	\$2, 212, 803	\$407, 250	\$100, 473	\$107, 492	\$16, 607	\$17, 105	\$4, 897	\$25, 199
Fuel.....	\$769, 172	\$242, 057	\$361, 145	\$71, 463	\$84, 337	\$4, 149	\$2, 426	\$591	\$2, 029	\$975
Purchased electric energy.....	\$2, 118, 646	\$1, 553, 984	\$350, 609	\$110, 369	\$20, 680	\$67, 825	\$1, 857	\$14, 582	\$250	\$8, 500
Expenditures for development (included above in "Principal expenses").....	\$1, 656, 000	\$871, 000	\$745, 000	\$5, 000	-----	-----	-----	\$34, 000	\$1, 000	-----
Value of products.....	\$54, 665, 658	\$38, 564, 631	\$11, 777, 014	\$1, 886, 700	\$1, 302, 754	\$653, 940	\$134, 686	\$112, 634	\$72, 425	\$159, 984
Machinery and other equipment purchased during the year, total cost.....	\$1, 792, 511	\$1, 504, 760	\$246, 782	\$16, 431	-----	\$17, 642	-----	\$940	\$5, 046	\$910
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	270, 615	186, 873	61, 442	11, 436	4, 949	3, 064	212	1, 440	52	1, 147
Prime movers, total horsepower <sup>7</sup> .....	54, 934	22, 941	23, 170	4, 635	3, 694	40	93	-----	25	336
Steam engines—										
Number.....	284	99	117	31	33	1	-----	-----	1	2
Horsepower.....	36, 595	15, 554	14, 130	3, 820	2, 936	40	-----	-----	25	90
Steam turbines—										
Number.....	9	7	2	-----	-----	-----	-----	-----	-----	-----
Horsepower.....	14, 450	5, 450	9, 000	-----	-----	-----	-----	-----	-----	-----
Internal-combustion engines—										
Number.....	51	22	2	11	6	-----	3	-----	-----	7
Horsepower.....	3, 889	1, 937	40	815	768	-----	93	-----	-----	246
Electric motors driven by purchased energy—										
Number.....	4, 459	3, 669	450	158	16	138	3	32	2	11
Horsepower.....	215, 631	103, 932	38, 272	6, 801	1, 255	3, 024	119	1, 440	27	811
Electric motors driven by energy generated by enterprises reporting:										
Number.....	177	139	36	2	-----	-----	-----	-----	-----	-----
Horsepower.....	12, 125	6, 148	5, 807	170	-----	-----	-----	-----	-----	-----
Electric generators: <sup>7</sup>										
Number.....	28	25	2	1	-----	-----	-----	-----	-----	-----
Kilowatts.....	16, 339	9, 354	6, 750	235	-----	-----	-----	-----	-----	-----
Fuel and electric energy consumed:										
Fuel—										
Coal, bituminous..... tons, 2,000 pounds.....	295, 848	120, 628	131, 208	25, 137	17, 544	1, 030	153	-----	-----	150
Coke..... tons, 2,000 pounds.....	18, 430	8, 015	10, 414	1	-----	-----	-----	-----	-----	-----
Fuel oils..... gallons.....	160, 298	-----	47, 550	19, 133	64, 053	1, 970	-----	8, 445	19, 147	-----
Gasoline and kerosene..... gallons.....	96, 741	27, 070	8, 680	31, 403	6, 821	-----	12, 327	-----	2, 250	13, 184
Electric energy—										
Purchased..... kw.-hours.....	234, 764, 738	152, 287, 482	66, 721, 757	8, 716, 122	1, 205, 400	4, 583, 802	140, 505	1, 014, 670	5, 000	90, 000
Generated by enterprises reporting..... kw.-hours.....	49, 141, 760	21, 580, 610	27, 376, 500	184, 650	-----	-----	-----	-----	-----	-----

<sup>1</sup> Graphite.<sup>2</sup> Bauxite.<sup>3</sup> Asphalt and bituminous rock, 1 enterprise; manganese, 1; sandstone, 1; silica, 2; stone, miscellaneous, 1.<sup>4</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>6</sup> Includes 3,472 horsepower for inactive prime movers.<sup>7</sup> Includes 4,599 kilowatts for inactive generators.

## ARIZONA

On the basis of the industries canvassed for 1929, Arizona ranked fifth among the States in value of mineral products and ninth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 31.3 per cent greater in 1929 than in 1919. This increase is accounted for principally by the increase in the value of production by the copper industry, for which comparative figures are given in Table 2. In contrast, the combined value of products of the gold and silver mining industries decreased from \$3,523,447 in 1919 to \$515,135 in 1929.

Statistics for nonproducing (development only) enterprises are given in Table 3, and are not included in any of the other tables shown.

The corporate form of organization was most common among enterprises in the mining industries in Arizona in 1929. As shown in Table 4, corporations operated 60.2 per cent of all enterprises, employed 97.4 per cent of the wage earners, and produced 99.1 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 5 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in Arizona, 88.7 per cent were in classes having not more than 100 wage earners. These enterprises employed only 10.2 per cent of the total number of wage earners and contributed 3.5 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 6, show that the "54 and

over but under 63" hour week predominated, while the 48-hour-week class ranked second.

Table 7 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, three enterprises in the "25,000 or more" horsepower group reported 103,804 horsepower, or 51.7 per cent. This amount, together with 45,296 horsepower reported by three enterprises in the next smaller group, represents 74.3 per cent of the total shown.

The statistics for wage earners presented in Table 8, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 9 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The copper industry ranked first in the State, accounting for 97.9 per cent of the total product, and Arizona ranked first among the States in 1929 in the copper industry, contributing 40.2 per cent of the total value of products for the industry in the United States.

The value of products of the metal-mining industries is not the value of the metals produced or recoverable but is, for the most part, an estimate of the sales value of the ores, concentrates, bullion, and mine-water precipitates or, in other words, the mine and mill products, most of which were not sold by the producers but were smelted, or smelted and refined, by them. The smelting and refining operations and the value of the metals—the final products—are reported by the census of manufactures.

The classification of metal mines, by industries, was determined by the metal of chief value. Therefore, the value of products of the gold and silver mining industries, for example, represents the value of products for the enterprises classified in those industries, and does not include the mine value of gold and silver contained in the ore or concentrates produced by other metal-mining industries.

## MINES AND QUARRIES—ARIZONA

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919 <sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)
	1929		1919			1929		1919	
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>3</sup> .....	133	129	155	-16.8	Principal expenses: <sup>4</sup> Salaries..... Wages..... Contract work..... Supplies and materials..... Fuel..... Purchased electric energy..... Value of products <sup>5</sup> .....	\$4,033,178	\$3,093,408	\$3,759,320	6.2
Number of mines and quarries.....	138	134	172	-22.1		28,290,779	28,238,107	26,193,312	7.8
Persons engaged, total.....	18,134	18,036	16,831	7.4		1,152,201	1,152,201	740,783	54.3
Proprietors and firm members.....	68	68	105	-35.2		17,434,645	17,414,110	16,160,891	7.8
Salaried employees.....	<sup>4</sup> 1,499	<sup>4</sup> 1,485	1,453	1.9		4,145,087	4,141,978	4,132,257	0.2
Wage earners (average for the year) <sup>6</sup> .....	16,567	16,533	15,268	8.3		1,560,776	1,542,777	1,245,268	23.0
Power equipment (total horsepower).....	202,428	201,456	165,076	22.0		116,477,536	116,134,804	88,478,111	31.3

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

TABLE 2.—SUMMARY FOR THE COPPER INDUSTRY: 1929 AND 1919

	1929	1919	Per cent of increase or decrease (-)		1929	1919	Per cent of increase or decrease (-)
Number of enterprises <sup>1</sup> .....	63	75	-16.0	Principal expenses—Continued. Contract work..... Supplies and materials..... Fuel..... Purchased electric energy..... Value of products.....			
Number of mines.....	68	89	-23.6		\$1,129,548	\$292,123	236.7
Wage earners (average for the year) <sup>2</sup> .....	15,504	14,237	9.3		16,919,123	14,982,529	12.9
Power equipment (total horsepower).....	192,753	157,599	22.3		4,055,402	4,034,605	0.5
Principal expenses: <sup>3</sup> Salaries.....	<sup>4</sup> \$3,823,020	\$3,539,381	8.0		1,488,400	1,161,670	28.1
Wages.....	26,947,217	24,855,574	8.4		113,980,541	84,217,141	35.3

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>3</sup> See GENERAL EXPLANATIONS—Expenses.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—SUMMARY FOR NONPRODUCING ENTERPRISES: 1929

	1929	1929	
Number of enterprises.....	103	Principal expenses—Continued Contract work..... Supplies, fuel, and purchased electric energy..... Expenditures for development (included above in "Principal expenses").....	
Number of mines.....	106		
Wage earners (average for the year).....	707		
Power equipment (total horsepower).....	12,022		
Principal expenses: Salaries.....	\$271,486		
Wages.....	918,287		
			\$104,157
			598,232
			1,785,008

TABLE 4.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	133	138	16,567	\$116,477,536	LEAD, total.....	13	13	309	\$770,543
Corporations.....	80	84	16,129	115,436,918	Corporations.....	5	5	266	675,110
Other <sup>1</sup> .....	53	54	438	1,040,618	Other <sup>1</sup> .....	8	8	43	95,433
COPPER, total.....	63	68	15,564	113,980,541	SAND AND GRAVEL, total.....	4	4	34	342,732
Corporations.....	35	39	15,339	113,404,780	Corporations.....	4	4	34	342,732
Other <sup>1</sup> .....	28	29	225	676,761	ASBESTOS, total.....	7	7	154	320,225
					Corporations <sup>2</sup> .....	7	7	154	320,225

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.<sup>2</sup> Includes 2 other forms of organization.

TABLE 5.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	133	138	16, 667	\$28, 290, 779	\$116, 477, 536	LEAD, total.....	13	13	309	\$398, 348	\$770, 548
1 to 5.....	50	50	147	100, 005	442, 957	1 to 5.....	4	4	10	6, 400	30, 238
6 to 20.....	44	45	495	069, 337	1, 400, 090	6 to 20.....	5	5	42	51, 511	71, 318
21 to 50.....	16	18	485	707, 202	1, 039, 384	21 to 50.....	2	2	257	340, 377	668, 987
51 to 100.....	8	9	566	769, 434	1, 203, 593	51 to 100.....	1	1			
101 to 250.....	3	3	1, 335	2, 398, 779	10, 066, 492	101 to 250.....	1	1			
251 to 500.....	2	3				2, 292	3, 998, 799	17, 361, 120	251 to 500.....	2	3
501 to 1,000.....	3	3	2, 292	3, 998, 799	17, 361, 120	1,001 to 2,500.....	0	0	261	449, 924	515, 135
1,001 to 2,500.....	0	0	11, 244	19, 577, 923	84, 963, 930	2,501 and over.....	1	1			
2,501 and over.....	1	1				GOLD AND SILVER, total.....	25	25			
COPPER, total.....	63	68	15, 504	26, 947, 217	113, 980, 541	1 to 5.....	12	12	33	46, 025	125, 501
1 to 5.....	21	21	66	74, 714	136, 761	6 to 20.....	9	9	99	156, 485	214, 780
6 to 20.....	17	18	200	264, 395	577, 709	21 to 50.....	4	4	129	247, 414	174, 854
21 to 50.....	5	7	131	179, 260	275, 312	ASBESTOS, total.....	7	7	154	194, 482	320, 225
51 to 100.....	6	7	441	608, 029	900, 142	1 to 5.....	2	2	154	104, 482	320, 225
101 to 250.....	2	2	1, 190	2, 244, 397	9, 785, 567	6 to 20.....	3	3			
251 to 500.....	2	3				2, 292	3, 998, 799	17, 361, 120			
501 to 1,000.....	3	3	2, 292	3, 998, 799	17, 361, 120	51 to 100.....	1	1			
1,001 to 2,500.....	0	0	11, 244	19, 577, 923	84, 963, 930						
2,501 and over.....	1	1									

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

TABLE 6.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Arizona was 52, distributed as follows: Coal, bituminous, 4; copper, 27; gold and silver, 12; granite, 1; lead, 6; limestone, 1; marble, 1. The combined value of products represented by these enterprises was \$391,497.]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total.....	81	86	16, 307	\$28, 006, 425	\$110, 036, 039	COPPER—Continued					
25 and over but under 36.....	1	1	6, 276	10, 883, 556	48, 205, 563	48.....	12	13	6, 006	\$10, 570, 640	\$47, 389, 637
44 and over but under 48.....	1	2				54 and over but under 63.....	29	23	8, 807	15, 089, 677	56, 623, 674
48.....	34	35	594	1, 121, 659	6, 784, 622	LEAD, total <sup>1</sup> .....	7	7	281	372, 930	730, 085
Over 48 but under 54.....	3	3	9, 437	10, 001, 210	61, 005, 864	48.....	1	1	281	372, 930	730, 085
54 and over but under 63.....	42	45				54 and over but under 63.....	6	6			
COPPER, total <sup>1</sup> .....	36	41	15, 421	26, 794, 025	113, 801, 662	GOLD AND SILVER, total <sup>1</sup> .....	13	13	204	377, 031	407, 222
25 and over but under 36.....	1	1	608	1, 133, 708	6, 788, 361	48.....	5	5	17	28, 372	109, 746
44 and over but under 48.....	1	2				54 and over but under 63.....	8	8	187	343, 659	297, 476
Over 48 but under 54.....	2	2									

<sup>1</sup> See headnote.

TABLE 7.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 52 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 detailed power-equipment information. Of the 81 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 11.]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSE-POWER OF—								
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 4,999 <sup>1</sup>	5,000 to 9,999	10,000 to 24,999	25,000 or more
Number of enterprises reporting power equipment <sup>2</sup> .....	70	6	15	20	7	6	6	4	3	3
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>3</sup> .....	200, 656	97	883	3, 339	2, 685	5, 005	11, 700	28, 147	45, 296	103, 804
Prime movers, total horsepower.....	153, 407	45	751	2, 433	1, 558	3, 029	3, 720	11, 800	28, 267	103, 804
Steam engines—										
Number.....	57		1	9	6		1	12	4	24
Horsepower.....	28, 886		37	476	506		170	4, 800	9, 394	13, 564
Steam turbines—										
Number.....	17						2	5	1	9
Horsepower.....	104, 943						1, 600	5, 000	8, 043	90, 300
Internal-combustion engines—										
Number.....	171	4	31	48	21	17	42	2	6	
Horsepower.....	10, 578	45	714	1, 937	1, 053	3, 029	1, 950	2, 000	8, 830	
Horsepower rating of inactive prime movers, included above.....	10, 948	20		182	31	435		1, 600	80	14, 600
Electric motors driven by purchased energy—										
Number.....	1, 300	5	6	33	19	54	189	443	551	
Horsepower.....	47, 249	62	132	906	827	1, 976	7, 980	16, 347	19, 029	
Electric motors driven by energy generated by enterprises reporting.....										
Number.....	2, 840		4	6	88	68	75	275	644	1, 730
Horsepower.....	167, 436		40	360	650	1, 810	3, 563	8, 350	36, 808	116, 355
Electric generators:										
Number.....	70		1	4	2	10	5	26	11	11
Kilowatts.....	100, 163		25	286	625	1, 552	2, 200	6, 670	21, 095	67, 700

<sup>1</sup> Includes the group "2,500 to 4,999."

<sup>2</sup> See headnote.

<sup>3</sup> See Table 9 for total horsepower rating of power equipment for all enterprises.

TABLE 8.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929  
 [The month of maximum employment 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 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, total.....	10,567	<b>14,381</b>	15,598	16,286	17,018	17,133	17,143	17,253	16,941	13,446	16,919	16,800	16,372	86.3
Copper.....	15,564	<b>14,016</b>	14,851	15,446	16,030	16,112	16,032	16,141	15,830	15,405	15,887	15,720	15,240	86.8
Lead.....	300	<b>246</b>	172	146	224	228	320	323	355	386	412	446	482	29.5
Gold and silver.....	261	<b>213</b>	223	242	271	288	304	323	304	239	228	242	255	65.9
Asbestos.....	154	<b>71</b>	130	202	205	215	155	151	143	121	118	120	114	53.0
Mercury.....	72	<b>62</b>	60	61	62	61	61	73	73	75	87	92	97	61.9
Limestone.....	62	<b>62</b>	62	62	62	62	62	62	62	62	62	62	62	100.0
Other stones.....	47	<b>33</b>	36	37	64	60	59	60	60	56	33	32	37	44.0
Sand and gravel.....	34	<b>36</b>	37	30	33	34	32	33	34	35	43	32	29	60.5
Other industries.....	64	<b>62</b>	62	60	67	73	68	75	71	67	49	54	59	65.3

TABLE 9.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises]

	Total	Copper <sup>1</sup>	Lead	Sand and gravel	Asbestos	Limestone	Mercury	Gold and silver <sup>2</sup>	Other stones <sup>3</sup>	Other industries <sup>4</sup>
Number of enterprises <sup>5</sup> .....	133	63	13	4	7	4	3	25	4	10
Number of mines and quarries.....	133	63	13	4	7	4	3	25	4	10
Persons engaged in industry, total (all classes).....	18,134	17,009	343	48	163	72	79	297	53	70
Proprietors and firm members.....	88	42	9	—	—	4	—	11	2	—
Principal salaried officers of corporations <sup>6</sup> .....	18	10	—	4	—	—	—	2	1	—
Other salaried officers and employees <sup>6</sup> .....	1,431	1,303	25	10	6	6	7	23	3	5
Wage earners (average for the year).....	16,567	16,564	309	34	154	62	72	261	47	64
Principal expenses:										
Salaries and wages—										
Principal officers of corporations <sup>6</sup> .....	\$102,725	\$60,000	—	\$13,975	—	—	—	\$7,450	\$4,800	\$3,600
Other salaried officers and employees <sup>6</sup> .....	\$3,630,463	\$3,753,120	\$47,212	\$22,735	\$19,466	\$7,400	\$11,165	\$54,240	\$7,000	\$3,100
Wage earners.....	\$28,290,779	\$26,947,217	\$368,348	\$2,072	\$194,482	\$64,800	\$77,503	\$440,024	\$41,400	\$64,431
Contract work.....	\$1,162,201	\$1,129,848	\$22,143	—	—	—	—	\$510	—	—
Supplies.....	\$7,434,045	\$10,019,123	\$219,764	\$20,635	\$21,846	\$19,110	\$21,535	\$181,069	\$17,621	\$13,242
Fuel.....	\$4,145,087	\$4,055,402	\$23,636	\$3,109	\$23,865	\$3,657	\$12,525	\$21,161	—	\$1,732
Purchased electric energy.....	\$1,500,776	\$1,488,400	—	\$17,099	—	\$360	\$175	\$40,242	\$5,537	\$2,123
Expenditures for development (included above in "Principal expenses").....	\$9,836,000	\$9,037,000	\$201,000	—	\$55,000	\$4,000	\$21,000	\$461,000	—	\$7,000
Value of products.....	\$116,477,536	\$113,980,541	\$776,543	\$342,732	\$320,225	\$133,640	\$180,993	\$515,135	\$110,530	\$173,107
Machinery and other equipment purchased during the year, total cost.....	\$7,247,585	\$6,948,534	\$114,612	\$17,620	\$49,337	\$4,282	\$30,227	\$64,637	—	\$18,236
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	202,428	192,753	1,617	972	470	697	478	4,036	615	490
Prime movers, total horsepower <sup>7</sup> .....	164,894	148,801	1,617	40	470	685	395	2,336	100	150
Steam engines—										
Number.....	97	64	1	—	1	12	—	17	2	—
Horsepower.....	30,373	28,827	22	—	37	445	—	942	100	—
Steam turbines—										
Number.....	17	17	—	—	—	—	—	—	—	—
Horsepower.....	104,943	104,943	—	—	—	—	—	—	—	—
Internal-combustion engines—										
Number.....	171	100	15	1	14	9	7	20	—	5
Horsepower.....	19,578	15,031	1,665	40	433	240	395	1,394	—	150
Electric motors driven by purchased energy—										
Number.....	1,320	1,173	—	34	—	2	10	69	24	5
Horsepower.....	47,534	43,952	—	632	—	12	83	1,700	515	340
Electric motors driven by energy generated by enterprises reporting:										
Number.....	2,840	2,740	37	—	4	—	—	59	—	—
Horsepower.....	167,436	165,164	672	—	40	—	—	1,560	—	—
Electric generators: <sup>8</sup>										
Number.....	70	58	5	—	1	—	—	6	—	—
Kilowatts.....	100,163	98,205	775	—	25	—	—	1,063	—	—
Fuel and electric energy consumed:										
Fuel—										
Coal—										
Anthracite..... tons, 2,240 pounds.....	77	77	—	—	—	—	—	—	—	—
Bituminous..... tons, 2,000 pounds.....	4,124	3,537	—	—	—	500	—	37	—	—
Coke..... tons, 2,000 pounds.....	367	357	—	—	—	—	—	—	—	—
Fuel oils..... gallons.....	87,523,804	86,742,061	822,113	—	143,000	—	25,100	276,584	—	14,940
Gasoline and kerosene..... gallons.....	334,583	179,635	1,706	11,070	16,000	7,500	60,000	56,699	—	1,973
Electric energy—										
Purchased..... kw.-hours.....	132,243,548	129,638,797	593,472	—	11,450	—	6,000	1,708,660	211,335	67,334
Generated by enterprises reporting..... kw.-hours.....	451,924,097	447,730,597	3,109,200	—	18,800	—	—	1,055,500	—	—

<sup>1</sup> Includes 1 operation on old tailings.

<sup>2</sup> Gold, lode, 13 enterprises; gold, placer, 1; silver, 11.

<sup>3</sup> Granite, 1 enterprise; marble, 1; sandstone, 1; stone, miscellaneous, 1.

<sup>4</sup> Coal, bituminous, 4 enterprises (operated by U. S. Government); fuller's and filtering earths, 1; gypsum, 1; manganese, 1; minor metals, 1; silica, 1; zinc, 1.

<sup>5</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>6</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>7</sup> Includes 14,948 horsepower for inactive prime movers.

<sup>8</sup> Includes 13,704 kilowatts for inactive generators.

## ARKANSAS

On the basis of the industries canvassed for 1929, Arkansas ranked thirty-first among the States in value of mineral products and twenty-fifth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 25.9 per cent greater in 1929 than in 1919. Practically all of this increase was accounted for by the bituminous-coal (including semianthracite), stone, and bauxite industries.

The corporation was the dominant form of organization among enterprises in the mining industries in Arkansas in 1929. As shown in Table 2, corporations operated 62.5 per cent of all enterprises, employed 82.2 per cent of the wage earners, and produced 85 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 3 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in Arkansas, 79.7 per cent were in classes having not more than 50 wage earners. These enterprises employed 37.8 per cent of the total number of wage earners and contributed 41.4 per cent of the total value of products.

The statistics for the number of hours in the working week for wage earners, given in Table 4, show that the 48-hour week predominated, while the "54 and over but under 63" class ranked second. In the bituminous-coal industry over 72 per cent of the wage earners were employed 48 hours per week, while in the other industries a longer working week predominated.

Table 5 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 15 enterprises in the 500-999 horsepower group reported 10,523 horsepower, or 29.5 per cent, while all enterprises reporting 250 or more accounted for 30,798 horsepower, or 86.4 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 6, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 7 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The bituminous-coal industry ranked first in the State, accounting for 54.3 per cent of the total value of products, while the bauxite industry ranked second in importance. Although Arkansas ranked first among the States in the production of bauxite, the statistics for this industry are not shown separately for the State in order to avoid disclosing the data for individual enterprises. The statistics are given for the industry as a whole in the General Report for the United States.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919 <sup>2</sup>			1929		1919 <sup>2</sup>	
	All industries	Revised (for comparative purposes) <sup>3</sup>				All industries	Revised (for comparative purposes) <sup>3</sup>		
Number of enterprises <sup>4</sup> .....	128	112	119	-5.9	Principal expenses: <sup>6</sup>				
Number of mines and quarries.....	137	121	126	-4.0	Salaries.....	\$809,490	\$644,405	\$572,407	12.6
Persons engaged, total.....	5,453	5,103	4,033	26.5	Wages.....	4,917,309	4,565,463	4,546,728	0.4
Proprietors and firm members.....	72	64	109	-41.3	Contract work.....	106,000	106,000	57,434	85.6
Salaried employees.....	4,351	4,295	310	-4.8	Supplies and materials.....	1,089,489	928,052	1,180,035	-20.0
Wage earners (average for the year) <sup>5</sup> .....	5,030	4,744	3,614	31.3	Fuel.....	276,480	199,941	320,330	-37.6
Power equipment (total horsepower).....	37,624	30,020	20,748	47.6	Purchased electric energy.....	337,696	233,307	111,115	165.0
					Value of products <sup>7</sup> .....	11,367,754	9,795,695	7,782,703	25.0

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

## MINES AND QUARRIES—ARKANSAS

TABLE 2.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	128	137	5,030	\$11,367,754	SAND AND GRAVEL, total.....	16	16	286	\$1,572,050
Corporations.....	80	87	4,137	9,066,916	Corporations.....	10	10	179	1,187,783
Other <sup>1</sup> .....	48	50	893	1,700,838	Other <sup>1</sup> .....	6	6	107	384,276
COAL, BITUMINOUS, total.....	83	86	3,651	6,172,710	LIMESTONE, total.....	6	6	120	184,574
Corporations.....	55	57	3,128	5,442,000	Corporations <sup>2</sup> .....	6	6	120	184,574
Other <sup>1</sup> .....	28	29	523	729,710					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.  
<sup>2</sup> Include 1 other form of organization.

TABLE 3.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	128	137	5,030	\$4,917,309	\$11,367,754	COAL, BITUMINOUS—Continued.					
Not reported.....	1	1	55	80,002	236,799	101 to 250.....	9	10	1,546	\$1,390,550	\$2,374,860
1 to 5.....	17	18	615	661,554	1,599,031	251 to 500.....	1	1			
6 to 20.....	48	48	1,231	1,102,055	2,877,202	SAND AND GRAVEL, total.....	16	16	286	351,840	1,572,050
21 to 50.....	36	39	1,037	1,145,309	1,989,548	1 to 5.....	3	3	12	19,602	145,560
51 to 100.....	14	15	2,002	1,857,689	4,071,174	6 to 20.....	7	7	107	167,262	667,021
101 to 250.....	10	14				21 to 50.....	6	6	167	174,022	758,888
251 to 500.....	2	2				LIMESTONE, total.....	6	6	120	77,071	184,574
COAL, BITUMINOUS, total.....	83	86	3,651	3,630,148	6,172,710	6 to 20.....	4	4	120	77,071	184,574
1 to 5.....	6	8	28	28,034	37,893	21 to 50.....	2	2			
6 to 20.....	33	33	413	441,770	736,361						
21 to 50.....	18	19	627	629,567	1,036,808						
51 to 100.....	14	15	1,037	1,145,309	1,989,548						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

TABLE 4.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Arkansas was 31, distributed as follows: Coal, bituminous, 28; lead, 1; marble, 1; sandstone, 1. The combined value of products represented by these enterprises was \$339,772.]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total.....	97	106	4,760	\$4,651,507	\$11,027,982	SAND AND GRAVEL, total.....	16	16	286	\$351,840	\$1,572,050
Not reported.....	1	1	402	302,810	513,597	44 and over but under 48.....	1	1	55	94,800	395,388
Under 25.....	8	8	358	304,181	609,548	48.....	1	1			
25 and over but under 36.....	4	4	222	268,971	604,109	Over 48 but under 54.....	1	1	231	256,980	1,176,071
36 and over but under 40.....	1	1	2,550	2,043,860	4,818,010	54 and over but under 63.....	11	11			
40.....	5	6	1,176	1,098,328	4,371,128	63 and over.....	2	2			
44 and over but under 48.....	2	2	48	38,363	210,690	LIMESTONE, total.....	6	6	120	77,071	184,574
48.....	45	48				54 and over but under 63.....	5	5	120	77,071	184,574
Over 48 but under 54.....	1	1				63 and over.....	1	1			
54 and over but under 63.....	27	32									
63 and over.....	3	3									
COAL, BITUMINOUS, total.....	55	58	3,393	3,368,986	5,849,988						
Under 25.....	8	8	402	302,810	499,872						
25 and over but under 36.....	4	4	340	296,281	464,548						
40.....	3	4	100	126,160	192,636						
44.....	38	40	2,636	2,641,727	4,693,033						
54 and over but under 63.....	2	2									

<sup>1</sup> See headnote.

MINES AND QUARRIES—ARKANSAS

TABLE 5.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

(This table does not include data for 31 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 detailed power-equipment information. Of the 97 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 5)

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	92	3	19	23	27	15	5
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	35, 062	43	1, 111	3, 710	10, 037	10, 523	10, 233
Prime movers, total horsepower.....	13, 875	35	515	1, 117	3, 174	4, 900	4, 125
Steam engines—							
Number.....	112	1	9	13	38	33	18
Horsepower.....	10, 228	20	200	795	2, 383	4, 270	2, 500
Internal-combustion engines—							
Number.....	47	2	10	6	17	8	4
Horsepower.....	3, 035	15	255	322	779	639	1, 025
Water wheels and water turbines—							
Number.....	2				2		
Horsepower.....	12				12		
Horsepower rating of inactive prime movers, included above.....	215		65		150		
Electric motors driven by purchased energy—							
Number.....	808	2	37	110	294	159	200
Horsepower.....	21, 787	8	590	2, 593	6, 803	5, 014	6, 113
Electric generators:							
Number.....	6					1	5
Kilowatts.....	1, 095					20	1, 075

<sup>1</sup> See headnote.

<sup>2</sup> See Table 7 for total horsepower rating of power equipment for all enterprises.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

(The month of maximum employment 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 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, total.....	5, 030	5, 064	5, 576	4, 011	<b>3, 359</b>	3, 810	4, 230	4, 846	5, 351	5, 733	5, 838	5, 938	5, 947	56. 5
Coal, bituminous.....	3, 051	4, 388	4, 333	2, 666	<i>2, 014</i>	2, 448	2, 813	3, 404	3, 850	4, 281	4, 452	4, 572	4, 592	43. 9
Sand and gravel.....	280	256	<i>211</i>	231	254	246	289	298	310	365	350	316	319	57. 8
Other stones.....	235	203	178	240	242	269	243	241	240	243	241	245	222	66. 2
Limestone.....	120	122	120	133	124	102	114	114	161	120	126	<i>91</i>	104	58. 5
Marble.....	14	<i>5</i>	<i>5</i>	17	17	17	17	17	17	17	17	17	<i>5</i>	29. 4
Abrasive materials.....	10	10	10	10	10	10	10	10	10	10	10	10	10	
Other industries.....	714	<i>680</i>	710	714	698	727	744	762	754	697	692	687	704	89. 2

## MINES AND QUARRIES—ARKANSAS

TABLE 7.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Certain of the "Other industries," however, were of greater importance in the State than some of the industries shown separately]

	Total	Coal, bituminous	Sand and gravel	Limestone	Marble	Abrasive materials <sup>1</sup>	Other stones <sup>2</sup>	Other industries <sup>3</sup>
Number of enterprises <sup>4</sup> .....	128	83	16	6	3	3	6	11
Number of mines and quarries.....	137	86	16	6	3	3	9	14
Persons engaged in industry, total (all classes).....	5,453	3,880	350	131	18	12	261	801
Proprietors and firm members.....	72	53	8	—	1	—	3	7
Principal salaried officers of corporations <sup>5</sup> .....	99	60	18	—	—	—	4	11
Other salaried officers and employees <sup>6</sup> .....	252	110	33	11	3	2	10	69
Wage earners (average for the year).....	5,030	3,661	286	120	14	10	235	714
Principal expenses:								
Salaries and wages—								
Principal officers of corporations <sup>1</sup> .....	\$331,301	\$186,727	\$59,011	—	\$3,370	—	\$30,050	\$75,513
Other salaried officers and employees <sup>2</sup> .....	\$473,189	\$189,145	\$75,074	\$16,020	\$3,370	\$2,300	\$35,210	\$153,070
Wage earners.....	\$4,917,309	\$3,630,143	\$351,846	\$77,071	\$12,302	\$6,209	\$241,505	\$598,228
Contract work.....	\$106,600	\$15,235	—	—	—	\$11,448	—	\$79,917
Supplies.....	\$1,089,489	\$548,991	\$161,397	\$13,538	\$3,350	\$235	\$150,209	\$211,709
Fuel.....	\$276,480	\$48,346	\$79,539	\$7,810	—	\$755	\$15,775	\$127,755
Purchased electric energy.....	\$337,696	\$202,044	\$54,339	\$4,237	\$3,732	—	\$34,399	\$38,245
Expenditures for development (included above in "Principal expenses").....	\$220,000	\$182,000	—	\$3,000	—	\$3,000	—	\$27,000
Value of products.....	\$11,367,754	\$6,172,710	\$1,572,059	\$184,574	\$60,431	\$22,045	\$925,053	\$2,420,982
Machinery and other equipment purchased during the year, total cost.....	\$618,958	\$179,573	\$164,644	\$53,334	—	—	\$80,613	\$140,704
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	37,624	20,658	7,004	1,385	288	105	2,095	6,080
Prime movers, total horsepower <sup>4</sup> .....	14,399	9,357	4,631	550	60	105	225	2,421
Steam engines—								
Number.....	131	82	32	3	1	—	4	9
Horsepower.....	10,752	6,087	3,418	390	60	—	205	592
Internal-combustion engines—								
Number.....	47	10	16	4	—	5	1	11
Horsepower.....	3,635	270	1,233	160	—	105	20	1,817
Water wheels and water turbines—								
Number.....	2	—	—	—	—	—	—	2
Horsepower.....	12	—	—	—	—	—	—	12
Electric motors driven by purchased energy—								
Number.....	881	603	58	27	9	—	46	138
Horsepower.....	23,225	14,301	2,323	835	223	—	1,370	3,668
Electric generators: <sup>7</sup>								
Number.....	6	1	—	—	—	—	—	5
Kilowatts.....	1,095	20	—	—	—	—	—	1,075
Fuel and electric energy consumed:								
Fuel—								
Coal—								
Anthracite..... tons, 2,240 pounds.....	3,650	—	1,800	1,200	—	—	500	150
Bituminous..... tons, 2,000 pounds.....	30,374	17,925	5,038	220	—	—	2,302	4,880
Coke..... tons, 2,000 pounds.....	10	—	—	—	—	—	—	10
Fuel oils..... gallons.....	1,513,283	5,344	706,200	1,500	—	5,033	—	735,186
Gasoline and kerosene..... gallons.....	214,104	23,455	123,351	17,250	—	—	22,990	27,058
Gas, natural..... M cubic feet.....	542,180	—	132	—	—	—	59,100	482,948
Electric energy, purchased..... kw.-hours.....	15,104,637	8,613,640	2,183,785	274,144	186,066	—	1,434,725	2,412,277

<sup>1</sup> Abrasive diamonds, 2 enterprises; whetstones, 1.

<sup>2</sup> Basalt, 2 enterprises; sandstone, 3; stone, miscellaneous, 1.

<sup>3</sup> Bauxite, 4 enterprises; lead, 2; manganese, 3; sand, glass, 1; silica, 1.

<sup>4</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> Includes 215 horsepower for inactive prime movers.

<sup>7</sup> Inactive.

# CALIFORNIA

On the basis of the industries canvassed for 1929, California ranked sixteenth among the States in value of mineral products and eighteenth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 23.8 per cent greater in 1929 than in 1919.

Notwithstanding increases in the value of products for most industries, marked decreases are shown in the production by the gold and silver (lode) and gold (placer) industries, for which comparative figures are given in Table 2.

Statistics for nonproducing (development only) enterprises are given in Table 3, and are not included in any of the other tables shown.

The industries reported for 1929, ranked according to value of products, are shown in Table 4. The sand and gravel industry ranked first in the State, accounting for 20.2 per cent of the total product, followed in order of importance by the copper, gold (lode), miscellaneous stone, and gold (placer) industries. The combined value of products of these five industries was 61.4 per cent of the total for the State.

The corporate form of organization was most common among enterprises in the mining industries in California in 1929. As shown in Table 5, corporations operated 61.3 per cent of all enterprises, employed 89.7 per cent of the wage earners, and produced 90.5 per cent of the total value of products. Other forms of

organization include partnerships, enterprises operated by individuals, etc.

Table 6 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises employing wage earners in California, 92.5 per cent were in classes having not more than 50 wage earners. These enterprises employed 45 per cent of the total number of wage earners and contributed 43.5 per cent of the total value of products. On the other hand, only 7.5 per cent of the total number of enterprises had more than 50 wage earners each. These enterprises employed 55 per cent of the total number of wage earners and contributed 56.5 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 7, show that 43.2 per cent of the wage earners were employed 48 hours per week, and 42.1 per cent were in the "54 and over but under 63" class.

Table 8 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 24 enterprises in the 1,000-2,499 horsepower group reported 39,047 horsepower, or 25.8 per cent. This amount, together with 40,327 horsepower reported by 6 enterprises in the "5,000 or more" group, and 25,904 horsepower reported by 34 enterprises in the 500-999 group, represents 69.4 per cent of the aggregate shown.

The classification of metal mines, by industries, was determined by the metal of chief value. Therefore, the value of products of the silver-mining industry, for example, represents the value of products for those enterprises classified in that industry, and does not include the mine value of silver contained in the ore or concentrates produced by other metal-mining industries.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919 <sup>2</sup>			1929		1919 <sup>2</sup>	
	All industries	Revised (for comparative purposes) <sup>3</sup>				All industries	Revised (for comparative purposes) <sup>3</sup>		
Number of enterprises <sup>1</sup> .....	367	294	322	-8.7	Principal expenses: <sup>6</sup>				
Number of mines and quarries.....	441	340	357	-4.8	Salaries.....	\$3,008,767	\$1,925,063	\$1,367,902	40.7
Persons engaged, total.....	9,323	7,720	7,884	-2.1	Wages.....	12,270,081	10,381,906	9,380,026	10.7
Proprietors and firm members.....	157	134	311	-50.9	Contract work.....	534,593	513,583	378,512	35.7
Salaried employees.....	4,118	4,727	573	28.9	Supplies and materials.....	6,312,482	5,569,035	6,795,617	-18.1
Wage earners (average for the year) <sup>4</sup> .....	8,048	6,859	7,000	-2.0	Fuel.....	768,862	500,806	493,427	21.6
Power equipment (total horsepower).....	155,879	110,019	98,124	18.1	Purchased electric energy.....	2,048,962	1,052,783	1,959,408	-15.7
					Value of products <sup>7</sup> .....	38,645,889	30,638,618	24,751,580	23.8

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

## MINES AND QUARRIES—CALIFORNIA

TABLE 2.—SUMMARY FOR GOLD AND SILVER (LODE) AND GOLD (PLACER) INDUSTRIES: 1929 AND 1919

	1929	1919	Per cent of increase or decrease (-)		1929	1919	Per cent of increase or decrease (-)
Number of enterprises <sup>1</sup> .....	83	159	-47.8	Principal expenses—Continued.			
Number of mines.....	88	187	-52.9	Contract work.....	\$381,812	\$147,477	158.9
Wage earners (average for the year) <sup>2</sup> .....	2,182	3,983	-45.2	Supplies and materials.....	1,604,085	4,445,497	-63.9
Power equipment (total horsepower).....	42,048	62,900	-33.2	Fuel.....	25,219	156,973	-83.8
Principal expenses: <sup>3</sup>				Purchased electric energy.....	907,772	1,519,349	-40.3
Salaries.....	\$502,908	\$714,448	-29.6	Value of products <sup>4</sup> .....	7,625,204	16,711,411	-54.4
Wages.....	3,423,355	5,345,527	-30.0				

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>3</sup> See GENERAL EXPLANATIONS—Expenses.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>5</sup> See GENERAL EXPLANATIONS—Value of Products.

TABLE 3.—SUMMARY FOR NONPRODUCING ENTERPRISES: 1929

Number of enterprises.....	166	Principal expenses—Continued.	
Number of mines and quarries.....	173	Contract work.....	\$199,817
Wage earners (average for the year).....	1,176	Supplies, fuel, and purchased electric energy.....	847,493
Power equipment (total horsepower).....	11,809	Expenditures for development (includes "Principal expenses" listed above in addition to other expenditures, not called for).....	2,941,126
Principal expenses:			
Salaries.....	\$266,341		
Wages.....	1,621,405		

TABLE 4.—PRINCIPAL INDUSTRIES RANKED IN ORDER OF VALUE OF PRODUCTS: 1929

INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products	INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products
All industries, total.....	367	441	8,048	\$38,645,889	Basalt.....	16	17	221	\$1,015,909
Sand and gravel.....	68	96	1,153	7,800,188	Sandstone.....	14	15	164	787,680
Copper.....	10	11	994	4,748,996	Clay.....	12	19	143	431,693
Gold, lode.....	58	58	1,627	3,940,925	Fuller's and filtering earths.....	4	4	55	226,010
Stone, miscellaneous.....	40	64	491	3,789,013	Silver.....	3	3	64	214,684
Gold, placer.....	22	27	491	3,469,595	Sand, molding.....	5	5	36	207,683
Limestone.....	23	24	675	1,976,716	Talc and soapstone.....	5	7	38	142,714
Granite.....	24	27	235	1,409,584	Abrasive materials.....	3	3	23	84,347
Mercury.....	18	18	446	1,178,387	Other industries <sup>3</sup> .....	42	43	1,192	7,222,365

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>3</sup> Asphalt and bituminous rock, 2 enterprises; barite, 2; feldspar, 4; gypsum, 2; lead, 4; magnesite, 4; manganese, 1; marble, 4; minor metals, 2; sand, glass, 1; silica, 9; slate, 2; sulphur and pyrites, 2; miscellaneous minerals, 3. See headnote, Table 10.

TABLE 5.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	367	441	8,048	\$38,645,889	GRANITE, total.....	24	27	235	\$1,409,584
Corporations.....	225	288	7,217	34,966,780	Corporations.....	12	15	192	1,302,398
Other <sup>1</sup> .....	142	153	831	3,679,109	Other <sup>1</sup> .....	12	12	43	107,186
SAND AND GRAVEL, total.....	68	96	1,153	7,800,188	MERCURY, total.....	18	18	446	1,178,387
Corporations.....	44	71	974	6,455,993	Corporations.....	9	9	340	888,880
Other <sup>1</sup> .....	24	25	179	1,344,495	Other <sup>1</sup> .....	9	9	106	294,607
COPPER, total.....	10	11	994	4,748,996	BASALT, total.....	16	17	221	1,015,909
Corporations.....	7	8	977	4,708,396	Corporations.....	11	12	205	953,769
Other <sup>1</sup> .....	3	3	17	40,600	Other <sup>1</sup> .....	5	5	16	62,140
GOLD, LODE, total.....	58	58	1,627	3,940,925	SANDSTONE, total.....	14	15	164	787,680
Corporations.....	34	34	1,502	3,756,519	Corporations.....	8	8	116	547,976
Other <sup>1</sup> .....	24	24	65	184,406	Other <sup>1</sup> .....	6	7	48	239,704
STONE, MISCELLANEOUS, total.....	40	64	491	3,789,013	CLAY, total.....	12	19	143	431,693
Corporations.....	17	39	382	3,302,869	Corporations.....	6	6	111	336,489
Other <sup>1</sup> .....	23	25	109	486,144	Other <sup>1</sup> .....	6	13	32	95,204
GOLD, PLACER, total.....	22	27	491	3,469,595	SILVER, total.....	3	3	64	214,684
Corporations.....	13	18	447	3,312,519	Corporations.....	3	3	64	214,684
Other <sup>1</sup> .....	9	9	44	157,076					
LIMESTONE, total.....	23	24	675	1,976,716					
Corporations <sup>1</sup> .....	23	24	675	1,976,716					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.<sup>2</sup> Includes 2 other forms of organization.

MINES AND QUARRIES—CALIFORNIA

TABLE 6.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
<b>ALL INDUSTRIES, total<sup>3</sup></b> .....	362	436	8,048	\$12,270,081	\$38,628,289	<b>LIMESTONE, total</b> .....	23	24	675	\$921,309	\$1,076,716
Not reported.....	4	4			27,447	1 to 5.....	8	8	27	89,823	144,269
1 to 5.....	133	138	379	531,455	1,930,038	6 to 20.....	3	3	40	70,985	163,747
6 to 20.....	149	163	1,617	2,376,405	7,777,450	21 to 50.....	10	11	590	810,701	1,668,760
21 to 50.....	49	55	1,623	2,376,128	7,059,848	51 to 100.....	1	1			
51 to 100.....	11	17	772	1,174,530	3,205,727	101 to 250.....	1	1			
101 to 250.....	12	55	1,996	3,088,763	11,075,518	<b>STONE, MISCELLANEOUS, total<sup>3</sup></b> .....	39	63	491	802,430	3,784,213
251 to 500.....	3	3	1,691	2,722,800	7,552,255	1 to 5.....	21	22	64	76,521	338,325
501 to 1,000.....	1	1				6 to 20.....	15	17	170	269,750	1,491,844
<b>GOLD, LODE, total<sup>3</sup></b> .....	50	50	1,627	2,483,593	3,933,925	21 to 50.....	2	2	267	456,159	1,954,044
1 to 5.....	24	24	62	76,049	167,254	101 to 250.....	1	22			
6 to 20.....	21	21	226	308,468	274,727	<b>GOLD, PLACER, total</b> .....	22	27	491	830,212	3,469,595
21 to 50.....	4	4	112	150,977	187,222	1 to 5.....	7	7	21	25,325	48,017
51 to 100.....	3	3	214	367,785	646,216	6 to 20.....	10	10	116	189,493	469,098
101 to 250.....	3	3	1,013	1,585,314	2,758,500	21 to 50.....	3	3	354	627,394	2,952,480
251 to 500.....	1	1				<b>SAND AND GRAVEL, total</b> .....	68	96			
1 to 5.....	20	22	73	110,560	698,005	1 to 5.....	8	8			
6 to 20.....	34	35	351	584,207	2,529,289	1 to 5.....	2	2			
21 to 50.....	11	16	343	518,955	2,134,963	6 to 20.....	8	8	168	120,416	265,102
51 to 100.....	2	7	386	620,900	2,437,931	21 to 50.....	4	4			
101 to 250.....	1	17				<b>COPPER, total</b> .....	10	11	994	1,756,846	4,748,906
1 to 5.....	1	1	40	69,140	152,804	1 to 5.....	3	3	320	520,541	876,540
6 to 20.....	5	5				1 to 5.....	1	1			
21 to 50.....	2	3	945	1,687,706	4,596,192	6 to 20.....	4	4			
101 to 250.....	2	2				6 to 20.....	5	5	1	1	
251 to 500.....	2	2				251 to 500.....	2	2			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>3</sup> Exclusive of 5 enterprises employing no wage earners in industries as follows: Gold, lode, 2; stone, miscellaneous, 1; lead, 2.

TABLE 7.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in California was 66, distributed as follows: Basalt, 3; copper, 2; gold, lode, 24; gold, placer, 6; granite, 12; lead, 2; limestone, 4; marble, 1; sandstone, 1; slate, 1; stone, miscellaneous, 10. The combined value of products represented by these enterprises was \$440,165.]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
<b>ALL INDUSTRIES, total<sup>1</sup></b> .....	301	375	7,814	\$11,994,086	\$38,205,724	<b>LIMESTONE, total<sup>1</sup></b> .....	10	20	665	\$910,226	\$1,961,270
Not reported.....	4	4			27,447	25 and over but under 30.....	1	2	512	690,262	1,235,408
Under 25.....	4	4	12	11,876	51,896	44 and over but under 48.....	1	1			
25 and over but under 30.....	2	3	44	54,017	177,610	48.....	10	10			
36 and over but under 40.....	2	2				44 and over but under 48.....	9	12	7	7	153
44 and over but under 48.....	9	12	60	76,390	396,331	<b>STONE, MISCELLANEOUS, total<sup>1</sup></b> .....	30	54	473	780,932	3,716,194
48.....	145	166	3,375	5,004,603	14,196,090	36 and over but under 40.....	1	1	243	384,379	1,642,298
Over 48 but under 54.....	10	13	539	842,926	1,762,249	48.....	18	23			
54 and over but under 63.....	116	127	3,292	5,200,434	18,451,343	Over 48 but under 54.....	1	1	47	89,381	774,619
63 and over.....	9	44	492	804,840	3,142,768	54 and over but under 63.....	5	5			
<b>GOLD, LODE, total<sup>1</sup></b> .....	34	34	1,513	2,357,658	3,793,009	63 and over.....	5	24	183	307,172	1,209,282
Under 25.....	1	1	874	1,418,255	2,491,439	<b>GOLD, PLACER, total<sup>1</sup></b> .....	16	21	467	811,197	3,439,295
48.....	14	14				48.....	2	2	2	2	467
Over 48 but under 54.....	2	2	639	989,403	1,801,570	Over 48 but under 54.....	1	1			
54 and over but under 63.....	17	17	<b>SAND AND GRAVEL, total</b> .....	68	96	1,153	1,843,622	7,800,188			
36 and over but under 40.....	1	1	439	685,048	3,182,095	<b>MERCURY, total</b> .....	18	18	446	667,495	1,178,387
44 and over but under 48.....	1	2				44 and over but under 48.....	34	40	3	3	19
48.....	34	40	714	1,158,574	4,638,093	Over 48 but under 54.....	3	3			
Over 48 but under 54.....	1	3	985	1,741,532	4,788,396	54 and over but under 63.....	11	11	427	637,621	1,137,156
54 and over but under 63.....	29	32				63 and over.....	2	18			
63 and over.....	2	18	<b>COPPER, total<sup>1</sup></b> .....	8	9	985	1,741,532	4,788,396			
48.....	1	1	985	1,741,532	4,788,396	<b>BASALT, total<sup>1</sup></b> .....	13	14	217	314,553	992,909
Over 48 but under 54.....	2	3				48.....	9	9	9	9	138
54 and over but under 63.....	5	5				54 and over but under 63.....	4	5	79	87,499	811,180

<sup>1</sup> See headnote.

MINES AND QUARRIES—CALIFORNIA

TABLE 8.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 66 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 detailed power-equipment information. Of the 301 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 26]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—							
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	5,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	275	13	64	74	57	34	24	3	6
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	151,588	195	3,512	11,317	19,972	25,904	39,047	11,314	40,327
Prime movers, total horsepower.....	24,157	134	1,825	3,766	4,171	4,378	6,633	1,000	2,250
Steam engines—									
Number.....	77		3	7	13	18	31		5
Horsepower.....	7,690		88	460	877	1,795	2,980		1,500
Steam turbines—									
Number.....	1		1						
Horsepower.....	20		20						
Internal-combustion engines—									
Number.....	297	11	70	53	67	39	40	12	5
Horsepower.....	15,006	134	1,711	2,801	3,044	2,283	3,653	1,000	350
Water wheels and water turbines—									
Number.....	12		1	6	1	3			1
Horsepower.....	1,381		6	425	250	300			400
Horsepower rating of inactive prime movers, included above.....	683	2	30	160		120	371		
Electric motors driven by purchased energy—									
Number.....	3,830	9	88	348	602	629	869	422	863
Horsepower.....	127,431	61	1,687	7,551	15,801	21,526	32,414	10,314	38,077
Electric motors driven by energy generated by enterprises reporting:									
Number.....	56		10	10	29	7			
Horsepower.....	965		104	240	451	170			
Electric generators:									
Number.....	12		4	2	2	3			1
Kilowatts.....	1,226		76	180	375	195			400

<sup>1</sup> See headnote.

<sup>2</sup> See Table 10 for total horsepower rating of power equipment for all enterprises.

TABLE 9.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.....	8,048	7,407	<b>7,402</b>	7,621	7,901	7,913	8,054	8,257	8,428	8,399	8,518	8,513	8,158	86.0
Gold, lode.....	1,627	1,559	<i>1,518</i>	1,568	1,611	1,587	1,604	1,623	1,624	1,668	1,706	1,755	1,696	86.5
Sand and gravel.....	1,153	1,226	<b>1,296</b>	1,284	1,211	1,132	1,104	1,096	1,141	1,116	1,123	<i>1,051</i>	1,053	81.1
Copper.....	694	785	<i>749</i>	779	816	879	974	1,083	1,134	1,140	1,161	1,193	1,234	60.7
Limestone.....	675	621	633	661	705	746	712	719	720	705	634	636	<i>612</i>	82.0
Stone, miscellaneous.....	491	497	493	490	457	460	507	606	508	497	527	515	<i>443</i>	84.1
Gold, placer.....	491	491	488	491	517	471	469	490	506	500	492	486	497	90.7
Mercury.....	440	<i>352</i>	368	363	403	435	443	483	509	512	515	525	446	67.0
Granite.....	235	187	190	242	248	261	269	256	219	208	269	242	242	69.5
Basalt.....	221	195	194	203	210	235	250	228	245	248	239	220	<i>189</i>	75.6
Sandstone.....	164	167	167	158	157	161	202	165	160	153	165	160	<i>130</i>	64.4
Clay.....	143	<i>132</i>	<i>132</i>	133	136	143	139	145	146	153	161	157	141	82.0
Silver.....	64	34	43	43	38	55	41	42	57	93	113	121	113	27.3
Fuller's and filtering earths.....	55	<i>36</i>	<i>36</i>	<i>36</i>	64	64	64	64	64	64	64	64	<i>36</i>	56.3
Talc and soapstone.....	38	31	<i>30</i>	39	40	39	34	36	42	40	41	40	41	71.4
Sand, molding.....	36	<i>29</i>	30	32	34	38	38	36	30	33	42	47	33	61.7
Other stones.....	33	23	29	<i>27</i>	31	34	36	30	35	35	37	35	28	71.1
Abrasive materials.....	23	23	23	23	23	23	23	23	23	23	23	23	23	
Other industries.....	1,150	1,014	<i>983</i>	1,049	1,200	1,172	1,143	1,226	1,205	1,206	1,206	1,243	1,201	77.7

# MINES AND QUARRIES—CALIFORNIA

85

TABLE 10.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Certain of the "Other Industries," however, were of greater importance in the State than some of the industries shown separately]

	Total	Sand and gravel	Copper	Gold, lode <sup>1</sup>	Stone, miscellaneous	Gold, placer	Limestone	Granite	Mercury
Number of enterprises <sup>2</sup> .....	367	68	10	58	40	22	23	24	18
Number of mines and quarries.....	441	96	11	58	64	27	24	27	18
Persons engaged in industry, total (all classes).....	9,323	1,500	1,067	1,769	641	580	703	281	481
Proprietors and firm members.....	157	22	4	36	25	14	2	20	7
Principal salaried officers of corporations <sup>3</sup> .....	160	55	4	21	13	16	5	8	4
Other salaried officers and employees <sup>3</sup> .....	958	330	65	85	112	59	21	20	24
Wage earners (average for the year).....	8,048	1,153	994	1,627	491	491	675	235	446
Principal expenses:									
Salaries and wages—									
Principal officers of corporations <sup>3</sup> .....	\$668,668	\$256,779	\$17,850	\$46,505	\$57,397	\$65,510	\$10,025	\$36,500	\$19,500
Other salaried officers and employees <sup>3</sup> .....	\$2,340,090	\$808,021	\$138,798	\$190,792	\$280,043	\$172,141	\$53,161	\$50,304	\$53,134
Wage earners.....	\$12,270,081	\$1,843,622	\$1,756,846	\$2,483,593	\$802,430	\$839,212	\$921,309	\$373,874	\$657,495
Contract work.....	\$534,593	\$11,107		\$379,162	\$7,448		\$10,660	\$48	\$9,919
Supplies.....	\$6,312,482	\$731,157	\$1,106,824	\$1,010,732	\$780,105	\$547,903	\$409,508	\$284,757	\$288,026
Fuel.....	\$768,862	\$165,567	\$26,310	\$20,556	\$94,466		\$68,125	\$34,241	\$50,142
Purchased electric energy.....	\$2,048,962	\$390,051	\$237,032	\$331,151	\$133,315	\$560,799	\$56,282	\$39,448	\$42,228
Expenditures for development (included above in "Principal expenses").....	\$1,922,000		\$473,000	\$897,000	\$41,000	\$37,000	\$44,000	\$30,000	\$201,000
Value of products.....	\$38,645,889	\$7,800,188	\$4,748,996	\$3,940,925	\$3,789,013	\$3,469,595	\$1,070,716	\$1,409,584	\$1,178,387
Machinery and other equipment purchased during the year, total cost.....	\$1,787,736	\$281,217	\$65,351	\$187,020	\$130,533	\$316,805	\$15,795	\$27,536	\$416,291
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	155,879	45,215	14,293	23,102	12,288	17,671	10,329	5,589	2,566
Prime movers, total horsepower <sup>4</sup> .....	26,366	10,361	540	2,465	1,506	349	3,215	1,240	704
Steam engines—									
Number.....	146	44	1	35	17	15	6	11	
Horsepower.....	9,839	5,132	100	992	834	349	680	907	
Steam turbines—									
Number.....	1			1					
Horsepower.....	20			20					
Internal-combustion engines—									
Number.....	297	88	4	21	15		27	8	24
Horsepower.....	15,066	5,229	40	592	672		2,535	333	704
Water wheels and water turbines—									
Number.....	12		1	11					
Horsepower.....	1,381		400	981					
Electric motors driven by purchased energy—									
Number.....	3,901	1,153	308	402	347	368	154	105	116
Horsepower.....	129,573	34,854	13,753	20,637	10,782	17,322	7,114	4,340	1,862
Electric motors driven by energy generated by enterprises reporting:									
Number.....	56	7		5			10		10
Horsepower.....	965	170		110			240		104
Electric generators: <sup>5</sup>									
Number.....	12	2	1	1			2		5
Kilowatts.....	1,226	115	400	175			180		156
Fuel and electric energy consumed:									
Fuel—									
Coal—									
Anthracite..... tons, 2,240 pounds.....	7			5	2				
Bituminous..... tons, 2,000 pounds.....	2,816			101	1,036		145	218	1
Fuel oils..... gallons.....	13,101,607	3,061,139	403,155	160,868	1,050,831		3,360,587	912,006	1,442,778
Gasoline and kerosene..... gallons.....	1,846,025	604,531	27,044	50,994	183,807		86,084	33,353	76,675
Gas, natural..... M cubic feet.....	396,760	2,470			8,100				
Electric energy—									
Purchased..... kw.-hours.....	184,571,796	23,225,902	28,509,537	26,037,318	9,559,255	64,317,873	6,222,918	2,967,197	3,657,971
Generated by enterprises reporting..... kw.-hours.....	2,595,460	138,000	685,750	424,480			1,060,000		227,000

<sup>1</sup> Includes 2 operations on old tailings.  
<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.  
<sup>4</sup> Includes 683 horsepower for inactive prime movers.  
<sup>5</sup> Includes 80 kilowatts for inactive generators.

## MINES AND QUARRIES—CALIFORNIA

TABLE 10.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929—Continued

[See note at head of this table]

	Basalt	Sandstone	Clay	Fuller's and filtering earths	Silver	Sand, molding	Talc and soapstone	Abrasive materials <sup>1</sup>	Other stones <sup>2</sup>	Other industries <sup>3</sup>
Number of enterprises <sup>4</sup> .....	16	14	12	4	3	5	5	3	6	36
Number of mines and quarries.....	17	15	10	4	3	5	7	3	6	37
Persons engaged in industry, total (all classes).....	256	198	103	59	75	43	43	29	38	1,334
Proprietors and firm members.....	4	10	2	—	—	1	—	1	3	6
Principal salaried officers of corporations <sup>5</sup> .....	10	5	4	—	5	—	—	—	2	10
Other salaried officers and employees <sup>5</sup> .....	21	10	14	4	9	6	5	5	33	159
Wage earners (average for the year).....	221	164	143	55	64	36	38	23	—	1,169
Principal expenses:										
Salaries and wages—										
Principal officers of corporations <sup>5</sup> .....	\$45,922	\$34,200	\$33,600	—	\$14,600	—	—	—	\$5,280	\$25,000
Other salaried officers and employees <sup>5</sup> .....	\$39,167	\$40,387	\$30,431	\$9,433	\$13,390	\$18,904	\$10,403	\$12,160	—	\$410,400
Wage earners.....	\$319,093	\$256,562	\$165,425	\$65,047	\$100,550	\$44,553	\$60,630	\$34,166	\$43,591	\$1,511,133
Contract work.....	\$2,000	—	\$5,528	\$13,304	\$2,650	\$9,903	\$400	\$1,109	—	\$81,166
Supplies.....	\$248,820	\$104,194	\$33,244	\$26,532	\$45,450	\$12,290	\$17,072	\$11,674	\$12,553	\$641,641
Fuel.....	\$13,474	\$10,957	\$9,583	\$60,420	\$4,663	\$3,489	\$3,532	\$5,190	\$884	\$101,207
Purchased electric energy.....	\$43,970	\$31,810	\$3,905	—	\$15,322	\$6,178	—	\$1,836	\$5,650	\$149,467
Expenditures for development (included above in "Principal expenses").....	\$1,000	\$13,000	\$32,000	—	\$36,000	\$1,000	\$11,000	—	\$5,000	\$100,000
Value of products.....	\$1,015,009	\$787,680	\$431,603	\$226,010	\$214,084	\$207,083	\$142,714	\$84,347	\$107,558	\$7,114,807
Machinery and other equipment purchased during the year, total cost.....	\$43,200	\$2,631	\$20,800	—	\$10,816	\$2,538	\$1,000	\$4,620	—	\$200,883
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	5,483	3,653	1,238	780	1,275	645	150	276	564	10,762
Prime movers, total horsepower <sup>6</sup> .....	920	460	678	780	225	234	150	120	128	2,241
Steam engines—										
Number.....	9	1	1	—	—	—	—	—	1	5
Horsepower.....	265	40	100	—	—	—	—	—	20	450
Internal-combustion engines—										
Number.....	11	9	20	2	3	7	6	5	4	43
Horsepower.....	655	410	573	780	225	234	150	120	108	1,791
Electric motors driven by purchased energy—										
Number.....	130	82	25	—	27	33	—	14	18	559
Horsepower.....	4,533	3,203	560	—	1,050	411	—	156	436	8,521
Electric motors driven by energy generated by enterprises reporting:										
Number.....	—	—	—	—	—	—	—	—	—	24
Horsepower.....	—	—	—	—	—	—	—	—	—	341
Electric generators: <sup>7</sup>										
Number.....	—	—	—	—	—	—	—	—	—	1
Kilowatts.....	—	—	—	—	—	—	—	—	—	200
Fuel and electric energy consumed:										
Fuel—										
Coal—										
Bituminous..... tons, 2,000 pounds.....	—	—	—	—	—	—	10	—	—	405
Fuel oils..... gallons.....	105,030	361,400	—	—	29,154	83,335	5,410	25,934	—	1,494,080
Gasoline and kerosene..... gallons.....	64,314	16,550	70,328	402,300	2,553	5,400	18,000	15,819	4,438	183,330
Gas, natural..... M cubic feet.....	—	—	—	—	—	—	—	—	—	386,184
Electric energy—										
Purchased..... kw.-hours.....	3,404,820	2,628,271	223,473	—	677,165	255,124	—	79,145	130,500	12,678,327
Generated by enterprises reporting..... kw.-hours.....	—	—	—	—	—	—	—	—	—	60,280

<sup>1</sup> Pumice.<sup>2</sup> Marble, 4 enterprises; slate, 2.<sup>3</sup> Asphalt and bituminous rock, 2 enterprises; barite, 2; feldspar, 4; gypsum, 2; lead, 4; magnesite, 4; manganese, 1; sand, glass, 1; silica, 9 (diatomaceous earth, 4; quartz, 2; silica rock, 1; silica sand, 1; siliceous mica schist, 1); sulphur and pyrites, 2; tungsten, 2; miscellaneous minerals, 3 (borates, 2; cyanite, 1).<sup>4</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>6</sup> Includes 683 horsepower for inactive prime movers.<sup>7</sup> Includes 80 kilowatts for inactive generators.

## COLORADO

On the basis of the industries canvassed for 1929, Colorado ranked fifteenth among the States in value of mineral products and twelfth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 19.3 per cent less in 1929 than in 1919. This decrease is accounted for principally in the gold and silver mining industries, for which comparative figures are given in Table 2.

Statistics for nonproducing (development only) enterprises are given in Table 3, and are not included in any of the other tables shown.

The corporation was the dominant form of organization among enterprises in the mining industries in Colorado in 1929. As shown in Table 4, corporations operated 66.2 per cent of all enterprises, employed 93.2 per cent of the wage earners, and produced 94.1 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 5 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises employing wage earners in Colorado, 73.4 per cent were in classes having not more than 50 wage earners. These enterprises employed only 17.9 per cent of the total number of wage earners and contributed 16.7 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 6, show that the 48-hour week predominated, while the "54 and over but

under 63" class ranked second. In the bituminous-coal industry 79.4 per cent of the wage earners were in the 48-hour-week class. In several of the other industries the longer working week predominated.

Table 7 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 11 enterprises in the 2,500-4,999 horsepower group reported 37,347 horsepower, or 32.7 per cent. This group, together with 500-999 and 1,000-2,499 horsepower groups, accounted for 81.3 per cent of the aggregate.

The statistics for wage earners presented in Table 8, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 9 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The bituminous-coal industry ranked first in the State, accounting for 63.9 per cent of the total value of products, and Colorado ranked eighth among the States in 1929 in the industry.

The value of products of the metal-mining industries is not the value of the metals produced or recoverable but represents the sales value of the ores, concentrates, bullion, and mine-water precipitates—in other words, the mine and mill products. The smelting and refining operations and the value of the metals—the final products—are reported by the census of manufactures.

The classification of metal mines, by industries, was determined by the metal of chief value. Therefore, the value of products of the silver-mining industry, for example, represents the value of products for those enterprises classified in that industry, and does not include the mine value of silver contained in the ore or concentrates produced by other metal-mining industries.

## MINES AND QUARRIES—COLORADO

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)
	1929		1919 <sup>2</sup>			1929		1919 <sup>2</sup>	
	All industries	Revised (for comparative purposes) <sup>3</sup>				All industries	Revised (for comparative purposes) <sup>3</sup>		
Number of enterprises <sup>4</sup> .....	314	311	460	-33.3	Principal expenses: <sup>6</sup> Salaries..... Wages..... Contract work..... Supplies and materials..... Fuel..... Purchased electric energy..... Value of products <sup>7</sup> .....	\$2,305,888	\$2,250,319	\$2,766,151	-18.6
Number of mines and quarries.....	343	333	523	-36.3		\$2,374,765	22,266,604	25,263,057	-11.9
Persons engaged, total.....	15,567	15,478	18,401	-15.0		536,454	536,454	897,930	34.8
Proprietors and firm members.....	142	142	370	-61.6		5,970,812	5,939,045	11,826,142	-49.8
Salaried employees.....	4,863	4,843	1,321	-36.2		717,083	715,183	1,232,647	-42.0
Wage earners (average for the year) <sup>5</sup> .....	14,562	14,493	10,710	-13.3		1,659,708	1,629,428	1,448,975	12.5
Power equipment (total horsepower).....	118,330	110,592	114,448	1.0		41,530,446	41,205,031	51,063,444	-19.3

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

TABLE 2.—SUMMARY FOR GOLD AND SILVER (LODE) INDUSTRIES: 1929 AND 1919

	1929	1919	Per cent of decrease		1929	1919	Per cent of decrease
Number of enterprises <sup>1</sup> .....	55	108	72.2	Principal expenses—Continued Contract work..... Supplies and materials..... Fuel..... Purchased electric energy..... Value of products <sup>3</sup> .....			
Number of mines.....	69	234	70.5		\$178,355	\$177,130	2.1
Wage earners (average for the year) <sup>2</sup> .....	1,049	3,495	52.8		1,068,435	7,224,175	85.2
Power equipment (total horsepower).....	13,293	32,421	59.0		234,592	517,200	54.6
Principal expenses: <sup>3</sup>					343,915	679,716	49.4
Salaries.....	4,358,041	\$663,531	46.0				
Wages.....	2,018,332	5,675,926	53.9				
					4,360,311	16,785,710	74.0

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>3</sup> See GENERAL EXPLANATIONS—Expenses.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>5</sup> See GENERAL EXPLANATIONS—Value of Products.

TABLE 3.—SUMMARY FOR NONPRODUCING ENTERPRISES: 1929

	1929		1929
Number of enterprises.....	117	Principal expenses—Continued. Contract work..... Supplies, fuel, and purchased electric energy.....	
Number of mines and quarries.....	123		\$77,450
Wage earners (average for the year).....	537		363,068
Power equipment (total horsepower).....	7,610	Expenditures for development (included above in "Principal expenses").....	1,158,744
Principal expenses:			
Salaries.....	\$146,845		
Wages.....	699,931		

# MINES AND QUARRIES—COLORADO

89

**TABLE 4.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929**

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	314	343	14,562	\$41,530,446	LIMESTONE, total.....	14	14	233	\$489,236
Corporations.....	208	234	13,578	39,080,978	Corporations.....	8	8	149	317,035
Other <sup>1</sup> .....	106	109	984	2,449,470	Other <sup>1</sup> .....	6	6	84	172,201
COAL, BITUMINOUS, total.....	173	176	10,420	26,553,407	SAND AND GRAVEL, total.....	3	10	69	325,415
Corporations.....	111	114	9,908	25,553,968	Corporations <sup>2</sup> .....	3	10	69	325,415
Other <sup>1</sup> .....	62	62	422	999,439	SILVER, total.....	11	16	152	303,251
GOLD, LODE, total.....	44	53	1,497	4,057,060	Corporations.....	7	10	128	151,328
Corporations.....	37	46	1,234	3,421,114	Other <sup>1</sup> .....	4	6	26	151,923
Other <sup>1</sup> .....	7	7	263	635,946	GRANITE, total.....	4	4	77	270,073
LEAD, total.....	18	20	733	2,940,136	Corporations.....	4	4	77	270,073
Corporations.....	13	15	653	2,772,207	CLAY, total.....	9	9	46	115,537
Other <sup>1</sup> .....	5	5	80	173,929	Corporations.....	4	4	19	54,681
COPPER, total.....	3	4	513	1,697,051	Other <sup>1</sup> .....	5	5	27	60,856
Corporations.....	3	4	513	1,697,051					
ZINC, total.....	9	10	238	906,538					
Corporations.....	3	4	207	823,295					
Other <sup>1</sup> .....	6	6	31	83,243					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

<sup>2</sup> Includes 1 other form of organization.

**TABLE 5.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929**

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total <sup>3</sup> .....	312	341	14,562	\$22,374,765	\$41,524,666	LEAD, total.....	18	20	733	\$1,440,008	\$2,046,136
Not reported.....	2	2	208	360,719	861,136	1 to 5.....	6	6	14	18,281	25,402
1 to 5.....	99	103	902	1,328,300	2,524,261	6 to 20.....	4	6	48	70,737	52,627
6 to 20.....	87	97	1,344	1,994,367	3,561,167	21 to 50.....	6	6	671	1,354,590	2,868,107
21 to 50.....	41	50	2,924	4,434,738	7,231,445	51 to 100.....	1	1			
51 to 100.....	40	40	5,949	9,291,762	18,809,020	251 to 500.....	1	1			
101 to 250.....	34	38	3,085	4,964,879	8,537,637	COPPER, total.....	3	4	513	774,844	1,697,051
251 to 500.....	9	11				21 to 50.....	1	2			
COAL, BITUMINOUS, total.....	173	176	10,420	15,700,860	26,553,407	101 to 250.....	1	1	513	774,844	1,697,051
1 to 5.....	50	50	140	183,550	346,487	251 to 500.....	1	1			
6 to 20.....	39	39	384	553,897	832,008	ZINC, total.....	9	10	238	865,137	906,538
21 to 50.....	19	19	634	897,895	1,472,918	1 to 5.....	4	4	10	10,164	24,573
51 to 100.....	33	33	2,459	3,675,315	6,175,937	6 to 20.....	3	3	228	354,973	881,965
101 to 250.....	25	26	4,373	6,768,094	12,662,406	21 to 50.....	1	1			
251 to 500.....	7	9	2,421	3,622,109	5,723,071	101 to 250.....	1	2			
GOLD, LODE, total <sup>3</sup> .....	43	52	1,497	2,418,321	4,054,060	LIMESTONE, total.....	14	14	233	288,519	489,236
Not reported.....	1	1	46	57,108	248,837	1 to 5.....	5	5	14	16,732	28,813
1 to 5.....	14	16	100	237,790	786,392	6 to 20.....	6	6	98	92,272	154,794
6 to 20.....	15	20	88	139,210	228,076	21 to 50.....	2	2	123	179,516	305,829
21 to 50.....	3	3	346	572,134	622,730	51 to 100.....	1	1			
51 to 100.....	5	5	557	1,411,939	2,168,025	SILVER, total.....	11	16	152	200,011	303,251
101 to 250.....	5	7				1 to 5.....	3	5	10	16,264	29,728
						6 to 20.....	7	8	142	183,747	273,523
						21 to 50.....	1	3			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>3</sup> Exclusive of 2 enterprises employing no wage earners in industries as follows: Gold, lode, 1; fluorspar, 1.

MINES AND QUARRIES—COLORADO

TABLE 6.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Colorado was 99, distributed as follows: Coal, bituminous, 74; gold, lode, 7; granite, 1; lead, 4; limestone, 2; marble, 1; sandstone, 1; silver, 4; zinc, 2. The combined value of products represented by these enterprises was \$819,171]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	218	247	14, 109	\$21, 823, 070	\$40, 711, 275	LEAD, total <sup>1</sup> .....	14	16	694	\$1, 889, 781	\$2, 925, 000
Not reported.....	3	3			12, 096	48.....	7	7	109	154, 622	248, 879
Under 25.....	5	5	465	574, 471	929, 112	54 and over but under 63.....	7	9	585	1, 235, 109	2, 676, 121
25 and over but under 36.....	5	5	586	729, 237	1, 572, 039	COPPER, total.....	3	4	513	774, 844	1, 697, 051
36 and over but under 40.....	2	2	137	204, 879	361, 189	48.....	1	1	513	774, 844	1, 697, 051
40.....	5	5	8, 009	12, 257, 106	20, 464, 948	54 and over but under 63.....	2	3			
44 and over but under 48.....	1	1	3, 098	6, 255, 900	11, 546, 249	ZINC, total <sup>1</sup> .....	7	8	226	354, 085	884, 088
48.....	138	146				48.....	4	4	84	47, 861	100, 708
54 and over but under 63.....	59	80				54 and over but under 63.....	3	4	192	306, 824	753, 380
COAL, BITUMINOUS, total <sup>1</sup> .....	99	102	10, 088	15, 297, 471	25, 882, 243	LIMESTONE, total <sup>1</sup> .....	12	12	226	280, 219	479, 030
Under 25.....	5	5	465	574, 471	929, 112	48.....	9	9	188	237, 759	402, 698
25 and over but under 36.....	5	5	586	729, 237	1, 572, 039	54 and over but under 63.....	3	3	38	42, 400	76, 338
36 and over but under 40.....	2	2	137	204, 879	361, 189	SILVER, total <sup>1</sup> .....	7	12	120	164, 580	287, 492
40.....	5	5	8, 009	12, 257, 106	20, 464, 948	48.....	3	5	31	35, 245	188, 768
44 and over but under 48.....	1	1	3, 098	6, 255, 900	11, 546, 249	54 and over but under 63.....	4	7	89	129, 335	98, 724
48.....	138	146									
54 and over but under 63.....	59	80									
GOLD, LODE, total <sup>1</sup> .....	37	46	1, 477	2, 395, 574	4, 003, 964						
Not reported.....	1	1	864	1, 412, 703	2, 142, 501						
48.....	21	25	613	982, 871	1, 861, 463						
54 and over but under 63.....	15	20									

<sup>1</sup> See headnote.

TABLE 7.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 99 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 detailed power-equipment information. Of the 218 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 31]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—						
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999
Number of enterprises reporting power equipment <sup>1</sup> .....	187	9	32	43	35	43	14	11
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	114, 322	148	1, 655	6, 706	12, 867	31, 831	23, 768	37, 947
Prime movers, total horsepower.....	20, 316	78	805	1, 499	4, 112	9, 787	7, 030	6, 605
Steam engines—								
Number.....	161		14	16	48	47	15	21
Horsepower.....	19, 098		325	863	3, 452	6, 858	3, 780	3, 820
Steam turbines—								
Number.....	14		3	1		4	5	3
Horsepower.....	7, 755		75	100		2, 170	3, 250	2, 100
Internal-combustion engines—								
Number.....	42		5	10	11	5		3
Horsepower.....	1, 929		68	365	335	250		525
Water wheels and water turbines—								
Number.....	10		1	3	3	2		
Horsepower.....	1, 034		20	140	325	509		
Horsepower rating of inactive prime movers, included above.....	2, 975		20		130	1, 095	850	880
Electric motors driven by purchased energy—								
Number.....	2, 717		5	38	391	885	423	773
Horsepower.....	84, 506		70	850	5, 207	8, 755	22, 044	16, 738
Electric motors driven by energy generated by enterprises reporting:								
Number.....	589		19	15	42	185	277	51
Horsepower.....	18, 450		394	481	1, 140	5, 666	8, 755	2, 044
Electric generators:								
Number.....	66		6	6	11	27	12	4
Kilowatts.....	11, 286		546	493	735	4, 425	3, 441	1, 040

<sup>1</sup> See headnote.

<sup>2</sup> See Table 9 for total horsepower rating of power equipment for all enterprises.

# MINES AND QUARRIES—COLORADO

91

**TABLE 8.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929**  
 [The month of maximum employment 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 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, total.....	14,562	<b>16,288</b>	16,109	15,341	13,142	12,741	<i>12,561</i>	12,824	13,232	14,743	15,536	16,016	16,205	77.1
Coal, bituminous.....	10,420	<b>12,443</b>	12,195	11,418	9,101	8,493	<i>8,269</i>	8,497	9,025	10,528	11,281	11,784	12,003	66.5
Gold, lode.....	1,497	<b>1,441</b>	1,445	1,466	1,490	1,526	<i>1,517</i>	1,563	1,563	1,511	1,545	1,416	1,485	90.6
Lead.....	733	<b>737</b>	773	738	770	753	<i>752</i>	741	708	720	731	697	668	86.4
Copper.....	513	<b>495</b>	478	492	472	496	<i>480</i>	494	451	467	457	450	440	80.4
Zinc.....	238	<b>165</b>	227	251	233	256	<i>255</i>	254	241	251	235	235	235	64.5
Limestone.....	233	213	<i>211</i>	212	217	230	242	224	214	234	216	267	308	68.5
Silver.....	152	142	143	134	163	174	184	139	153	156	157	136	99	52.4
Granite.....	77	51	52	63	57	86	98	86	98	96	92	90	64	52.0
Sand and gravel.....	69	51	51	57	84	77	92	83	83	69	68	61	52	55.4
Clay.....	46	47	47	50	46	46	50	48	47	46	45	41	43	82.0
Fluorspar.....	25	26	26	26	26	26	26	26	26	26	26	26	26	46.2
Gypsum.....	12	9	15	16	16	18	13	13	14	13	6	6	6	37.5
Sandstone.....	12	15	9	13	13	13	11	11	11	9	9	9	15	60.0
Other industries.....	535	453	437	<i>415</i>	425	535	563	605	598	606	588	598	575	68.5

**TABLE 9.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929**

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Certain of the "Other industries," however, were of greater importance in the State than some of the industries shown separately.]

	Total	Coal, bituminous	Gold, lode <sup>1</sup>	Lead <sup>2</sup>	Copper	Zinc	Limestone
Number of enterprises <sup>3</sup> .....	314	178	44	18	3	9	14
Number of mines and quarries.....	343	176	53	20	4	10	14
Persons engaged in industry, total (all classes).....	15,667	10,957	1,651	787	562	203	257
Proprietors and firm members.....	142	97	6	3	—	8	11
Principal salaried officers of corporations <sup>4</sup> .....	136	75	31	3	—	2	—
Other salaried officers and employees <sup>4</sup> .....	727	395	117	48	40	15	13
Wage earners (average for the year).....	14,562	10,420	1,497	733	513	238	238
Principal expenses:							
Salaries and wages—							
Principal officers of corporations <sup>4</sup> .....	\$610,795	\$336,372	\$67,250	\$4,500	—	\$4,200	—
Other salaried officers and employees <sup>4</sup> .....	\$1,935,093	\$862,373	\$260,357	\$120,809	\$110,420	\$40,275	\$20,134
Wage earners.....	\$22,374,765	\$15,700,860	\$2,418,321	\$1,440,008	\$774,844	\$305,137	\$238,519
Contract work.....	\$530,454	\$251,306	\$163,271	\$4,827	\$97,274	—	—
Supplies.....	\$5,970,812	\$2,615,787	\$996,078	\$668,603	\$314,080	\$140,440	\$62,196
Fuel.....	\$717,033	\$333,038	\$231,326	\$22,438	\$37,112	\$7,903	\$9,193
Purchased electric energy.....	\$1,659,708	\$723,055	\$315,235	\$178,652	\$131,692	\$33,672	\$5,597
Expenditures for development (included above in "Principal expenses").....	\$3,311,000	\$703,000	\$1,401,000	\$377,000	\$325,000	\$125,000	\$3,000
Value of products.....	\$41,530,446	\$26,553,407	\$4,057,000	\$2,040,136	\$1,697,051	\$906,638	\$489,236
Machinery and other equipment purchased during the year, total cost.....	\$1,796,385	\$635,679	\$646,720	\$169,273	\$6,537	\$8,746	\$70,365
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	118,330	77,174	11,414	6,851	6,491	4,069	1,526
Prime movers, total horsepower <sup>5</sup> .....	32,054	25,230	3,015	931	356	55	591
Steam engines—							
Number.....	211	174	7	6	1	—	5
Horsepower.....	21,336	18,668	1,150	302	56	—	218
Steam turbines—							
Number.....	16	14	1	—	—	—	—
Horsepower.....	7,755	6,405	1,250	—	—	—	—
Internal-combustion engines—							
Number.....	42	6	3	1	2	—	10
Horsepower.....	1,929	157	150	225	300	15	373
Water wheels and water turbines—							
Number.....	10	—	6	2	—	—	—
Horsepower.....	1,034	—	465	404	—	—	—
Electric motors driven by purchased energy—							
Number.....	2,793	1,476	350	157	284	27	34
Horsepower.....	36,276	51,944	8,399	5,920	6,135	4,014	935
Electric motors driven by energy generated by enterprises reporting:							
Number.....	539	420	163	—	—	—	—
Horsepower.....	18,450	13,535	4,693	—	—	—	—
Electric generators: <sup>6</sup>							
Number.....	60	57	8	—	—	—	—
Kilowatts.....	11,230	9,898	1,348	—	—	—	—
Fuel and electric energy consumed:							
Fuel—							
Coal, bituminous..... tons, 2,000 pounds.....	289,054	187,875	74,396	2,893	5,325	1,413	1,497
Coke..... tons, 2,000 pounds.....	93	—	51	—	12	—	—
Fuel oils..... gallons.....	132,867	—	34,367	—	83,375	2,450	15
Gasoline and kerosene..... gallons.....	100,801	5,491	17,822	3,140	1,557	—	6,976
Gas, natural..... M cubic feet.....	4,014	—	—	—	—	—	—
Electric energy—							
Purchased..... kw.-hours.....	93,206,726	35,147,016	13,090,458	16,185,921	8,196,400	6,586,000	529,537
Generated by enterprises reporting..... kw.-hours.....	16,587,400	7,455,462	8,710,370	420,960	—	—	—

<sup>1</sup> Includes 1 reduction mill for which separate report was received, and 1 operation on old tailings.

<sup>2</sup> Includes 1 reduction mill for which separate report was received.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> Includes 2,975 horsepower for inactive prime movers.

<sup>6</sup> Includes 3,301 kilowatts for inactive generators.

## MINES AND QUARRIES—COLORADO

TABLE 9.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929—Continued

[See note at head of this table]

	Sand and gravel	Silver <sup>1</sup>	Granite	Clay	Fluorspar	Gypsum	Sandstone	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	3	11	4	9	3	3	3	17
Number of mines and quarries.....	10	16	4	9	3	3	3	18
Persons engaged in industry, total (all classes).....	80	168	90	62	30	13	13	626
Proprietors and firm members.....		4		4	2		1	6
Principal salaried officers of corporations <sup>3</sup> .....	4	4	3	3	1			10
Other salaried officers and employees <sup>4</sup> .....	16	8	10	9	2	1		74
Wage earners (average for the year).....	69	152	77	46	25	12	12	586
Principal expenses:								
Salaries and wages—								
Principal officers of corporations <sup>4</sup> .....	\$22,600	\$9,025	\$7,600	\$480	\$1,850			\$150,918
Other salaried officers and employees <sup>4</sup> .....	\$82,969	\$21,409	\$20,938	\$6,050	\$3,350	\$1,800		\$188,204
Wage earners.....	\$108,161	\$200,011	\$122,294	\$50,774	\$43,064	\$13,972	\$11,983	\$827,217
Contract work.....		\$10,084	\$7,521					\$2,171
Supplies.....	\$31,787	\$72,357	\$30,193	\$4,523	\$3,913	\$3,883	\$6,062	\$1,119,140
Fuel.....	\$2,600	\$3,206	\$8,710	\$754	\$8,868	\$968		\$61,867
Purchased electric energy.....	\$30,280	\$28,680	\$11,064	\$300		\$1,100	\$233	\$144,548
Expenditures for development (included above in "Principal expenses").....		\$129,000		\$1,000	\$1,000			\$246,000
Value of products.....	\$325,415	\$303,261	\$270,073	\$115,637	\$51,239	\$27,867	\$21,562	\$3,766,074
Machinery and other equipment purchased during the year, total cost.....	\$62,000	\$19,410	\$28,232	\$117	\$1,650	\$6,500		\$161,156
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	1,738	1,379	606	90	427	72	115	5,788
Prime movers, total horsepower <sup>5</sup> .....	170	480	150	90	427			559
Steam engines—								
Number.....		2	2	5	5			4
Horsepower.....		300	25	30	347			240
Steam turbines—								
Number.....		1						
Horsepower.....		100						
Internal-combustion engines—								
Number.....	3	2	7	2	2			3
Horsepower.....	170	80	125	60	80			194
Water wheels and water turbines—								
Number.....								1
Horsepower.....								125
Electric motors driven by purchased energy—								
Number.....	83	68	24			4	4	282
Horsepower.....	1,568	1,399	546			72	115	5,229
Electric motors driven by energy generated by enterprises reporting:								
Number.....								6
Horsepower.....								172
Electric generators: <sup>6</sup>								
Number.....								1
Kilowatts.....								40
Fuel and electric energy consumed:								
Fuel—								
Coal, bituminous..... tons, 2,000 pounds.....		155	110	150	550			15,590
Coke..... tons, 2,000 pounds.....								
Fuel oils..... gallons.....					4,000			8,660
Gasoline and kerosene..... gallons.....	21,578	9,596	10,260	5,527	6,000	4,898		7,956
Gas, natural..... M cubic feet.....								4,014
Electric energy—								
Purchased..... kw.-hours.....	1,074,909	1,288,004	205,761			41,351	11,148	10,490,221
Generated by enterprises reporting..... kw.-hours.....								168

<sup>1</sup> Includes 1 operation on old tailings.<sup>2</sup> Fuller's and filtering earths, 1 enterprise; gold, placer, 1; iron ore, 3; marble, 2; mica, 1; minor metals (molybdenum, 1; tungsten, 6; vanadium, 1); silica, 1.<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>5</sup> Includes 2,976 horsepower for inactive prime movers.<sup>6</sup> Includes 3,301 kilowatts for inactive generators.

## CONNECTICUT

On the basis of the industries canvassed for 1929, Connecticut ranked thirty-eighth among the States in value of mineral products and forty-first in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the 1929 figures to exclude data for the sand and gravel industry, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 131.1 per cent greater in 1929 than in 1919. This increase is accounted for principally by the two leading industries—the quarrying of basalt and granite—for which comparative figures are given in Table 2.

The corporation was the dominant form of organization among enterprises in the mining industries in Connecticut in 1929. As shown in Table 3, corporations operated 71.2 per cent of all enterprises, employed 89.7 per cent of the wage earners, and produced 90.1 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises, 80.8 per cent were in classes having not more than 20

wage earners. These enterprises employed 43.9 per cent of the total number of wage earners and contributed 40.3 per cent of the total value of products.

The statistics for the number of hours in the working week for wage earners, given in Table 5, show that 65.8 per cent of the wage earners were reported as working 54 hours and over per week. In the basalt industry nearly all of the wage earners were in the "54 and over but under 63" class.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 5 enterprises in the "500 or more" horsepower group reported 5,717 horsepower, or 42 per cent. This amount, together with 4,660 horsepower reported by 14 enterprises in the next smaller group, represents 76.2 per cent of the total shown.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises. The basalt industry ranked first in the State, accounting for 69.7 per cent of the total value of products. Connecticut ranked second among the States in 1929 in the basalt industry.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (-)		ALL MINING AND QUARRYING INDUSTRIES			
	1929		1919				1929		1919	
	All industries	Revised (for comparative purposes) <sup>2</sup>					All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>3</sup> .....	52	42	41	(4)						
Number of mines and quarries.....	53	42	47	(9)						
Persons engaged, total.....	951	870	642	35.5						
Proprietors and firm members.....	19	16	27	(4)						
Salaried employees.....	116	93	72	(9)						
Wage earners (average for the year) <sup>4</sup> .....	816	761	543	40.1						
Power equipment (total horsepower).....	13,622	10,756	8,520	26.2						
Principal expenses: <sup>7</sup>										
Salaries.....	\$ 313,793	\$ 259,393	\$ 144,476	79.5						
Wages.....	1,307,364	1,220,326	646,624	88.7						
Contract work.....	450	450	27,038	-98.3						
Supplies and materials.....	205,285	184,732	304,096	-39.3						
Fuel.....	120,927	108,633	75,788	43.2						
Purchased electric energy.....	156,051	134,381	44,536	201.4						
Value of products <sup>8</sup> .....	4,193,403	3,310,102	1,649,003	131.1						

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

## MINES AND QUARRIES—CONNECTICUT

TABLE 2.—SUMMARY FOR BASALT AND GRANITE QUARRYING INDUSTRIES: 1929 AND 1919

	BASALT		GRANITE <sup>1</sup>		PER CENT OF INCREASE OR DECREASE (—)	
	1929	1919	1929	1919	Basalt	Granite
Number of enterprises <sup>2</sup> .....	19	20	12	11	( <sup>3</sup> )	( <sup>3</sup> )
Number of quarries.....	19	22	12	11	( <sup>3</sup> )	( <sup>3</sup> )
Wage earners (average for the year) <sup>4</sup> .....	420	363	217	92	15.7	( <sup>5</sup> )
Power equipment (total horsepower).....	7,470	6,254	1,374	1,165	19.4	17.9
Principal expenses: <sup>5</sup>						
Salaries.....	\$187,074	\$92,512	\$48,144	\$38,499	102.2	25.1
Wages.....	\$722,983	\$450,960	\$351,759	\$102,821	60.3	242.1
Contract work.....	\$450	\$19,337	.....	\$3,000	.....	.....
Supplies and materials.....	\$118,333	\$231,385	\$41,311	\$18,819	-49.0	119.5
Fuel.....	\$36,742	\$45,778	\$14,061	\$14,153	89.5	-0.7
Purchased electric energy.....	\$95,582	\$41,565	\$20,402	.....	129.8	.....
Value of products.....	\$2,924,085	\$1,282,579	\$576,899	\$206,546	181.6	179.3
Quantity (tons, 2,000 pounds).....	2,515,000	1,204,000	46,000	753,000	108.9	-13.2

<sup>1</sup> See GENERAL EXPLANATIONS—Milling and Manufacturing.<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>3</sup> Per cent not computed where base is less than 100.<sup>4</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>5</sup> See GENERAL EXPLANATIONS—Expenses.<sup>6</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>7</sup> Quantity figures for 1919 not compiled by Census Bureau. Figures from Mineral Resources of the United States, 1919—U. S. Geological Survey.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	52	53	816	\$4,193,403	GRANITE, total.....	12	12	217	\$576,899
Corporations.....	37	38	732	3,776,471	Corporations.....	5	5	189	476,495
Other <sup>1</sup> .....	15	15	84	416,932	Other <sup>1</sup> .....	7	7	28	100,404
BASALT, total.....	19	19	420	2,924,085	SAND AND GRAVEL, total.....	10	11	55	383,301
Corporations.....	16	16	382	2,716,395	Corporations.....	6	7	48	282,463
Other <sup>1</sup> .....	3	3	38	207,690	Other <sup>1</sup> .....	4	4	12	100,838

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	52	53	816	\$1,307,364	\$4,193,403	GRANITE, total.....	12	12	217	\$351,759	\$576,899
Not reported.....	1	1	35	57,982	236,623	Not reported.....	1	1	4	5,456	25,078
1 to 5.....	12	12	35	57,982	236,623	1 to 5.....	3	3	4	5,456	25,078
6 to 20.....	29	30	923	464,377	1,451,789	6 to 20.....	5	5	44	69,277	145,384
21 to 50.....	8	8	458	785,005	2,504,991	21 to 50.....	2	2	169	277,026	406,437
51 to 100.....	1	1	458	785,005	2,504,991	51 to 100.....	1	1	169	277,026	406,437
101 to 250.....	1	1	458	785,005	2,504,991	LIMESTONE, total.....	4	4	61	73,595	155,261
BASALT, total.....	19	19	420	722,083	2,924,085	6 to 20.....	3	3	61	73,595	155,261
1 to 5.....	1	1	154	245,122	881,463	21 to 50.....	1	1	61	73,595	155,261
6 to 20.....	12	12	154	245,122	881,463	SAND AND GRAVEL, total.....	10	11	55	87,038	383,301
21 to 50.....	5	5	286	477,861	2,042,622	1 to 5.....	7	7	23	42,729	188,769
101 to 250.....	1	1	286	477,861	2,042,622	6 to 20.....	3	4	32	44,309	194,532

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

# MINES AND QUARRIES—CONNECTICUT

95

**TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929**

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products			
ALL INDUSTRIES, total.....	51	52	815	\$1,306,164	\$4,188,403	GRANITE, total <sup>1</sup> .....	11	11	216	\$350,559	\$571,899			
Not reported.....	1	1	218	348,943	581,387	Not reported.....	1	1	216	350,559	571,899			
44 and over but under 48.....	9	9				44 and over but under 48.....	8	8						
48.....	1	1				Over 48 but under 54.....	1	1						
Over 48 but under 54.....	6	6	61	82,683	198,910	54 and over but under 63.....	1	1						
54 and over but under 63.....	33	34	536	874,538	3,408,106	LIMESTONE, total.....	4	4	61	73,595	155,261			
63 and over.....	1	1				48.....	1	1	Over 48 but under 54.....	1	1	61	73,595	155,261
BASALT, total.....	19	19	420	722,083	2,924,085	54 and over but under 63.....	1	1	54 and over but under 63.....	1	1			
Over 48 but under 54.....	1	1	420	722,083	2,924,085	SAND AND GRAVEL, total.....	10	11	55	87,038	383,301			
54 and over but under 63.....	18	18				54 and over but under 63.....	10	11	55	87,038	383,301			

<sup>1</sup> Exclusive of 1 enterprise whose value of products was less than \$20,000.

**TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929**

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—				TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—			
		Less than 100	100 to 249	250 to 499	500 or more			Less than 100	100 to 249	250 to 499	500 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	49	14	16	14	5	Prime movers and electric motors, etc.—Con. Electric motors driven by purchased energy—					
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	13,622	807	2,438	4,660	5,717	Number.....	240	25	47	86	82
Prime movers, total horsepower.....	3,816	518	1,193	1,360	750	Horsepower.....	9,806	294	1,245	3,300	4,907
Steam engines—						Electric motors driven by energy generated by enterprises reporting:					
Number.....	60	11	10	37	2	Number.....	14			9	5
Horsepower.....	2,095	370	615	1,260	750	Horsepower.....	211			161	50
Internal-combustion engines—						Electric generators:					
Number.....	18	4	12	2		Number.....	2			1	1
Horsepower.....	821	148	578	100		Kilowatts.....	135			60	75
Horsepower rating of inactive prime movers, included above.....	20	20									

<sup>1</sup> No power equipment was reported by 3 enterprises.

**TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929**

[The month of maximum employment 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 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, total.....	816	<b>548</b>	574	659	824	899	945	906	<b>977</b>	902	924	833	688	55.9
Basalt.....	420	320	<i>311</i>	318	441	483	480	491	498	483	463	405	352	62.7
Granite.....	217	<i>108</i>	137	169	189	199	230	255	268	281	274	277	208	38.4
Limestone.....	61	<i>49</i>	51	63	65	74	74	64	64	62	59	56	51	66.2
Sand and gravel.....	55	30	<i>29</i>	48	65	71	82	73	67	68	59	40	31	35.4
Feldspar.....	16	18	16	18	18	20	18	19	21	10	11	12	9	42.9
Other industries.....	47	<i>21</i>	30	43	46	52	52	64	61	58	58	43	37	32.8

## MINES AND QUARRIES—CONNECTICUT

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Two of the "Other industries," however, were of greater importance in the State than one of the industries shown separately.]

	Total	Basalt	Granite	Sand and gravel	Limestone	Feldspar	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	52	19	12	10	4	3	4
Number of mines and quarries.....	53	19	12	11	4	3	4
Persons engaged in industry, total (all classes).....	951	483	247	81	67	18	55
Proprietors and firm members.....	19	2	13	3	1	—	—
Principal salaried officers of corporations <sup>3</sup> .....	28	16	2	5	2	—	3
Other salaried officers and employees <sup>3</sup> .....	83	45	15	18	3	2	5
Wage earners (average for the year).....	816	420	217	55	61	16	47
Principal expenses:							
Salaries and wages—							
Principal officers of corporations <sup>1</sup> .....	\$128,584	\$37,989	\$9,600	\$26,720	\$3,700	—	\$575
Other salaried officers and employees <sup>3</sup> .....	\$185,209	\$99,085	\$38,544	\$27,680	\$6,280	\$3,800	\$9,820
Wage earners.....	\$1,307,304	\$722,933	\$351,750	\$87,038	\$73,505	\$15,423	\$59,508
Contract work.....	\$450	\$450	—	—	—	—	—
Supplies.....	\$205,285	\$118,333	\$41,311	\$20,553	\$9,535	\$8,317	\$12,236
Fuel.....	\$120,927	\$85,742	\$14,061	\$12,394	\$1,857	\$135	\$5,738
Purchased electric energy.....	\$156,051	\$95,532	\$20,402	\$21,670	\$10,572	\$1,500	\$9,876
Expenditures for development (included above in "Principal expenses").....	\$44,000	\$6,000	\$8,000	—	—	—	\$30,000
Value of products.....	\$4,193,403	\$2,924,085	\$576,809	\$383,301	\$155,261	\$28,546	\$125,311
Machinery and other equipment purchased during the year, total cost.....	\$252,112	\$108,141	\$1,570	\$44,077	\$350	\$1,423	\$30,551
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	13,622	7,470	1,374	2,866	710	283	919
Prime movers, total horsepower.....	3,816	1,325	1,060	790	150	33	458
Steam engines—							
Number.....	60	10	36	10	—	—	4
Horsepower.....	2,905	1,130	1,060	690	—	—	115
Internal-combustion engines—							
Number.....	18	3	—	4	3	2	6
Horsepower.....	821	195	—	100	150	33	343
Electric motors driven by purchased energy—							
Number.....	240	73	22	89	23	12	10
Horsepower.....	9,800	6,145	314	2,076	560	250	461
Electric motors driven by energy generated by enterprises reporting:							
Number.....	14	5	9	—	—	—	—
Horsepower.....	211	50	161	—	—	—	—
Electric generators:							
Number.....	2	1	1	—	—	—	—
Kilowatts.....	135	75	60	—	—	—	—
Fuel and electric energy consumed:							
Fuel—							
Coal—							
Anthracite..... tons, 2,240 pounds.....	224	—	212	—	—	—	12
Bituminous..... tons, 2,000 pounds.....	17,465	13,390	2,031	1,650	65	1	322
Coke..... tons, 2,000 pounds.....	73	—	—	—	—	—	73
Fuel oils..... gallons.....	53,252	47,074	10	6,110	—	43	116
Gasoline and kerosene..... gallons.....	99,369	55,837	—	11,614	10,537	850	20,528
Electric energy, purchased..... kw.-hours.....	6,950,367	4,769,077	593,309	774,404	521,464	80,000	212,113

<sup>1</sup> Marble, 2 enterprises; mica, 1; sandstone, 1.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.



## MINES AND QUARRIES—FLORIDA

TABLE 2.—SUMMARY FOR PHOSPHATE-ROCK-MINING INDUSTRY: 1929 AND 1919

	1929	1919	Per cent of increase or decrease (-)		1929	1919	Per cent of increase or decrease (-)	
Number of enterprises <sup>1</sup> .....	11	23	(2)	Principal expenses—Continued.				
Number of mines.....	18	40	(2)		Contract work.....	\$18,728	\$115,202	-83.8
Wage earners (average for the year) <sup>2</sup> .....	1,936	2,330	-16.9		Supplies and materials.....	\$1,231,363	\$1,456,370	-15.4
Power equipment (total horsepower).....	91,268	40,996	122.6		Fuel.....	\$664,135	\$1,277,999	-48.0
Principal expenses: <sup>4</sup>					Purchased electric energy.....	\$956,561	\$69,786	1270.7
Salaries.....	\$553,071	\$549,971	0.6	Value of products.....	\$9,714,645	\$6,678,888	45.5	
Wages.....	\$2,180,760	\$2,372,141	-8.1	Quantity (tons, 2,240 pounds).....	3,139,842	1,404,299	123.6	

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> Per cent not computed where base is less than 100.<sup>3</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>4</sup> See GENERAL EXPLANATIONS—Expenses.<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	66	74	3,173	\$14,014,933	CLAY, total.....	4	4	160	\$555,875
Corporations.....	51	59	3,045	13,675,659	Corporations.....	4	4	160	555,875
Other <sup>1</sup> .....	15	15	128	339,274	SAND AND GRAVEL, total.....	9	9	112	490,381
PHOSPHATE ROCK, total.....	11	18	1,936	9,714,645	Corporations.....	9	9	112	490,381
Corporations <sup>1</sup> .....	11	18	1,936	9,714,645					
LIMESTONE, total.....	37	37	495	1,891,799					
Corporations.....	26	25	390	1,623,901					
Other <sup>1</sup> .....	12	12	105	267,898					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.<sup>2</sup> Includes 1 other form of organization.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	66	74	3,173	\$3,151,530	\$14,014,933	LIMESTONE, total.....	37	37	495	\$419,708	\$1,891,799
1 to 5.....	17	17	52	48,892	282,221	1 to 5.....	10	10	33	31,503	149,777
6 to 20.....	27	27	294	285,538	1,170,709	6 to 20.....	20	20	211	201,392	752,442
21 to 50.....	10	10	362	268,256	1,325,901	21 to 50.....	7	7	251	186,813	989,580
51 to 100.....	2	3	1,127	1,184,568	4,700,601	CLAY, total.....	4	4	160	122,830	555,875
101 to 250.....	6	11	1,338	1,364,276	6,579,601	1 to 5.....	1	1	160	122,830	555,875
251 to 500.....	4	6	1,338	1,364,276	6,579,601	21 to 50.....	2	2	160	122,830	555,875
PHOSPHATE ROCK, total.....	11	18	1,936	2,180,760	9,714,645	51 to 100.....	1	1	160	122,830	555,875
6 to 20.....	2	2	75	72,270	282,155	SAND AND GRAVEL, total.....	9	9	112	105,709	490,381
51 to 100.....	1	2	826	966,604	3,887,896	1 to 5.....	3	3	8	7,713	67,137
101 to 250.....	5	10	826	966,604	3,887,896	6 to 20.....	5	5	104	97,996	423,244
251 to 500.....	3	4	1,035	1,141,870	5,544,694	21 to 50.....	1	1	104	97,996	423,244

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

MINES AND QUARRIES—FLORIDA

TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Florida was 16, distributed as follows: Limestone, 14; stone, miscellaneous, 2. The combined value of products represented by these enterprises was \$189,272]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	50	58	3,096	\$3,080,909	\$13,825,661	LIMESTONE, total <sup>1</sup> .....	23	23	420	\$351,837	\$1,710,227
Under 25.....	1	1	79	55,117	272,306	44 and over but under 48.....	1	1	94	70,416	521,398
40.....	1	1				48.....	3	3			
Over 40 but under 44.....	1	1				Over 48 but under 54.....	2	2			
44 and over but under 48.....	4	6				54 and over but under 63.....	17	17	326	280,921	1,188,829
48.....	5	6	173	325,240	1,433,871	CLAY, total.....	4	4	100	122,830	555,875
Over 48 but under 54.....	4	4	41	178,429	808,370	Under 25.....	1	1	160	122,830	555,875
54 and over but under 63.....	34	39	2,520	2,495,660	11,063,800	44 and over but under 48.....	1	1			
PHOSPHATE ROCK, total.....	11	18	1,930	2,180,760	9,714,645	Over 48 but under 54.....	1	1			
44 and over but under 48.....	1	3	293	374,816	1,566,113	54 and over but under 63.....	9	9			
48.....	1	2				40.....	1	1	18	16,013	59,992
Over 48 but under 54.....	1	1				44 and over but under 48.....	1	1			
54 and over but under 63.....	8	12				Over 48 but under 54.....	1	1			
			54 and over but under 63.....	6	6	94	89,096	430,389			

<sup>1</sup> See headnote.

TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 16 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 detailed power-equipment information]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—						
		25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 9,999 <sup>1</sup>	10,000 to 24,999
Number of enterprises reporting power equipment <sup>1</sup> .....	50	6	12	10	9	5	4	4
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	109,059	570	1,063	3,274	5,925	7,750	26,534	68,084
Prime movers, total horsepower.....	50,600	549	1,143	1,045	3,000	5,064	6,825	32,434
Steam engines—								
Number.....	62	4	9	9	12	23		5
Horsepower.....	0,320	215	480	590	610	3,515		916
Steam turbines—								
Number.....	21	2			4	1	4	10
Horsepower.....	38,008	90			800	600	5,000	31,518
Internal-combustion engines—								
Number.....	87	9	13	21	21	16	7	
Horsepower.....	6,246	244	583	1,065	1,590	949	1,825	
Water wheels and water turbines—								
Number.....	1		1					
Horsepower.....	80		80					
Horsepower rating of inactive prime movers, included above.....	14,088				470	750	1,825	11,043
Electric motors driven by purchased energy—								
Number.....	975	2	20	73	143	54	272	411
Horsepower.....	58,369	30	820	1,629	2,925	2,686	19,709	30,600
Electric motors driven by energy generated by enterprises reporting:								
Number.....	443	3		5		80	20	326
Horsepower.....	32,126	47		125		988	1,662	29,304
Electric generators:								
Number.....	22	3		1		5	9	4
Kilowatts.....	22,958	35		90		611	4,722	17,500

<sup>1</sup> Includes the group "5,000 to 9,999."

<sup>2</sup> See headnote.

<sup>3</sup> See Table 8 for total horsepower rating of power equipment for all enterprises.

## MINES AND QUARRIES—FLORIDA

TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 MONTH OR NEAREST REPRESENTATIVE DAY												Percent minimum is of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
All industries, total.	3,173	3,199	3,205	<b>3,086</b>	3,146	3,132	3,098	3,249	<b>3,316</b>	3,190	3,182	3,127	3,154	98.0
Phosphate rock	1,936	1,924	1,979	1,912	1,932	1,877	<b>1,845</b>	1,913	<b>1,989</b>	1,963	1,932	1,983	1,982	92.7
Limestone	495	492	481	481	532	510	602	578	553	471	471	378	301	62.8
Clay	160	178	177	178	179	165	160	153	147	151	146	142	140	78.2
Sand and gravel	112	85	80	106	105	99	91	104	120	124	146	139	139	54.8
Other industries	470	519	488	407	<i>398</i>	481	402	496	501	481	487	485	502	76.7

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. One of the "Other industries," however, was of greater importance in the State than two of the industries shown separately]

	Total	Phosphate rock	Limestone	Clay	Sand and gravel	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	66	11	37	4	9	5
Number of mines and quarries.....	74	18	37	4	9	6
Persons engaged in industry, total (all classes).....	3,583	2,162	508	183	134	506
Proprietors and firm members.....	16	1	14			1
Principal salaried officers of corporations <sup>3</sup> .....	46	4	21	10	5	6
Other salaried officers and employees <sup>4</sup> .....	348	221	68	13	17	29
Wage earners (average for the year).....	3,173	1,936	495	160	112	470
Principal expenses:						
Salaries and wages—						
Principal officers of corporations <sup>3</sup> .....	\$216,389	\$46,421	\$104,500	\$25,998	\$16,180	\$23,200
Other salaried officers and employees <sup>4</sup> .....	\$770,406	\$500,650	\$146,670	\$22,497	\$33,316	\$61,273
Wage earners.....	\$3,151,530	\$2,180,750	\$419,708	\$122,830	\$105,709	\$322,533
Contract work.....	\$27,643	\$18,728	\$8,800		\$115	
Supplies.....	\$1,764,720	\$1,231,363	\$272,646	\$88,770	\$43,672	\$128,369
Fuel.....	\$963,386	\$664,135	\$65,180	\$32,795	\$45,277	\$125,999
Purchased electric energy.....	\$1,146,590	\$956,561	\$80,020	\$46,316	\$28,074	\$25,710
Expenditures for development (included above in "Principal expenses").....	\$244,000	\$75,000	\$169,000			
Value of products.....	\$14,014,933	\$9,714,645	\$1,891,709	\$555,875	\$490,381	\$1,362,233
Machinery and other equipment purchased during the year, total cost.....	\$765,513	\$680,962	\$58,366	\$17,020	\$9,165	
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	110,291	91,268	11,074	2,012	3,007	2,030
Prime movers, total horsepower <sup>4</sup> .....	51,864	39,854	6,606	925	2,679	1,800
Steam engines—						
Number.....	86	14	56		8	8
Horsepower.....	7,530	1,481	4,234		1,005	810
Steam turbines—						
Number.....	21	14	2	4		1
Horsepower.....	38,008	36,518	00	800		600
Internal-combustion engines—						
Number.....	87	8	44	4	28	3
Horsepower.....	6,246	1,855	2,202	125	1,674	390
Water wheels and water turbines—						
Number.....	1		1			
Horsepower.....	80		80			
Electric motors driven by purchased energy—						
Number.....	979	698	99	124	41	22
Horsepower.....	68,427	51,414	4,468	1,087	1,228	230
Electric motors driven by energy generated by enterprises reporting:						
Number.....	443	355	3		30	55
Horsepower.....	32,126	30,966	47		433	680
Electric generators: <sup>5</sup>						
Number.....	22	13	3		3	3
Kilowatts.....	22,958	22,222	35		242	459
Fuel and electric energy consumed:						
Fuel—						
Coal, bituminous..... tons, 2,000 pounds.....	36,386	6,091	9,149	7,865	3,250	10,031
Fuel oils..... gallons.....	20,361,007	24,153,892	9,761	9,761	52,643	2,015,432
Gasoline and kerosene..... gallons.....	412,343	100,257	117,767	9,000	155,114	30,205
Electric energy—						
Purchased..... kw.-hours.....	106,917,257	99,761,895	3,493,562	1,519,250	1,046,550	1,086,000
Generated by enterprises reporting..... kw.-hours.....	52,209,426	50,792,426			217,000	1,200,000

<sup>1</sup> Fuller's and filtering earths, 3 enterprises; stone, miscellaneous, 2.<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>4</sup> Includes 14,088 horsepower for inactive prime movers.<sup>5</sup> Includes 3,557 kilowatts for inactive generators.

## GEORGIA

On the basis of the industries canvassed for 1929, Georgia ranked thirty-fifth among the States in value of mineral products and thirtieth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the 1929 figures to exclude data for the sand and gravel industry, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 131.2 per cent greater in 1929 than in 1919. Of the industries for which comparative figures for the two years are available, the granite, clay, and limestone industries show substantial increases in the value of products. The principal industries included in "Other industries" shown in Table 7 are, in order of importance: Fuller's and filtering earths, slate, and talc.

The corporation was the dominant form of organization among enterprises in the mining industries in Georgia in 1929. As shown in Table 2, corporations operated 72.2 per cent of all enterprises, employed 85.7 per cent of the wage earners, and produced 86.5 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 3 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises, 72.2 per

cent were in classes having not more than 50 wage earners. These enterprises employed 27.4 per cent of the total number of wage earners and contributed 27.3 per cent of the total value of products.

The statistics for the number of hours in the working week for wage earners, given in Table 4, show that the "54 and over but under 63" class ranked first for the industries as a whole. In the granite industry 59.2 per cent of the wage earners worked less than 48 hours per week, while in the other industries a longer working week prevailed.

Table 5 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 8 enterprises in the "1,000 or more" horsepower group reported 19,550 horsepower, or 55 per cent. This amount, together with 6,561 horsepower reported by 9 enterprises in the next smaller group, represents 73.5 per cent of the total shown.

The statistics for wage earners presented in Table 6, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 7 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The granite industry ranked first in the State, accounting for 22.9 per cent of the total value of products. Georgia ranked fifth among the States in 1929 in the granite industry.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)	
	1929		1919		1929		1919		
	All industries	Revised (for comparative purposes) <sup>2</sup>			All industries	Revised (for comparative purposes) <sup>2</sup>			
Number of enterprises <sup>3</sup> .....	79	74	74	( <sup>4</sup> )					
Number of mines and quarries.....	86	81	82	( <sup>4</sup> )					
Persons engaged, total.....	4,032	3,950	2,608	51.5					
Proprietors and firm members.....	31	28	33	( <sup>4</sup> )					
Salaried employees.....	<sup>5</sup> 274	<sup>5</sup> 257	178	44.4					
Wage earners (average for the year) <sup>6</sup> .....	3,727	3,665	2,307	52.9					
Power equipment (total horsepower).....	35,515	34,386	12,996	164.6					
					Principal expenses: <sup>7</sup>				
						\$ 878,396	\$ 649,587	\$ 855,013	83.0
						2,944,216	2,898,100	2,017,490	43.7
						346,259	346,259	35,205	881.0
						974,964	955,978	608,766	57.0
						545,373	525,527	296,047	77.2
						268,786	262,218	59,372	341.7
						9,611,219	9,439,132	4,082,152	131.2

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

## MINES AND QUARRIES—GEORGIA

TABLE 2.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	79	86	3,727	\$9,611,219	LIMESTONE, total.....	10	11	315	\$647,113
Corporations.....	57	64	3,193	8,315,659	Corporations.....	10	11	315	647,113
Other <sup>1</sup> .....	22	22	534	1,295,560	BARITE, total.....	5	6	205	626,401
GRANITE, total.....	28	30	1,265	2,201,313	Corporations.....	5	6	205	626,401
Corporations.....	14	16	924	1,722,499	IRON ORE, total.....	3	4	122	220,354
Other <sup>1</sup> .....	14	14	341	478,814	Corporations <sup>2</sup> .....	3	4	122	220,354
CLAY, total.....	9	11	797	2,161,812	SAND AND GRAVEL, total.....	5	5	62	172,037
Corporations.....	5	7	647	1,468,708	Corporations <sup>2</sup> .....	5	5	62	172,037
Other <sup>1</sup> .....	4	4	150	693,108					
MARBLE, total.....	5	5	286	749,737					
Corporations.....	5	5	286	749,737					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.<sup>2</sup> Includes 1 other form of organization.<sup>3</sup> Includes 2 other forms of organization.

TABLE 3.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	79	86	3,727	\$2,944,216	\$9,611,219	LIMESTONE, total.....	10	11	315	\$239,321	\$647,113
Not reported.....	1	1	30	30,400	117,729	0 to 20.....	4	4	53	49,115	96,903
1 to 5.....	9	10	323	260,942	748,098	21 to 50.....	4	4	262	190,206	550,210
6 to 20.....	27	27	609	494,782	1,758,990	51 to 100.....	2	3			
21 to 50.....	20	21	896	701,475	2,037,966	MARBLE, total.....	5	5	286	234,623	749,737
51 to 100.....	12	15	1,800	1,456,617	4,948,466	1 to 5.....	1	1	286	234,623	749,737
101 to 250.....	0	11				6 to 20.....	2	2			
251 to 500.....	1	1				21 to 50.....	1	1			
GRANITE, total.....	28	30	1,265	1,033,884	2,201,313	101 to 250.....	1	1			
1 to 5.....	4	4	12	12,820	23,500	BARITE, total.....	5	6	205	200,345	626,401
6 to 20.....	0	0	114	79,111	167,836	1 to 5.....	2	3	205	200,345	626,401
21 to 50.....	7	8	271	193,874	593,348	21 to 50.....	1	1			
51 to 100.....	4	5	289	207,479	546,084	51 to 100.....	2	2			
101 to 250.....	4	4	579	543,600	957,795						
CLAY, total.....	9	11	797	530,349	2,161,812						
1 to 5.....	1	1	60	46,587	463,273						
6 to 20.....	2	2									
21 to 50.....	1	1									
51 to 100.....	2	2	737	542,762	1,698,539						
101 to 250.....	2	4									
251 to 500.....	1	1									

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

# MINES AND QUARRIES—GEORGIA

**TABLE 4.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Georgia was 3, distributed as follows: Granite, 2; marble, 1. The combined value of products represented by these enterprises was \$18,076.]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	76	83	3,720	\$2,936,716	\$9,593,144	CLAY, total.....	9	11	797	\$599,849	\$2,161,812
Not reported.....	1	1				44 and over but under 48.....	1	1	22	15,587	43,273
40.....	2	2	757	658,929	1,403,474	48.....	2	2	355	236,883	1,335,074
44 and over but under 48.....	13	14				54 and over but under 63.....	3	3	420	339,879	783,465
48.....	3	3	229	125,402	150,669	63 and over.....	3	5			
Over 48 but under 54.....	13	13	406	322,096	648,156	LIMESTONE, total.....	10	11	315	239,321	647,113
54 and over but under 63.....	37	41	1,794	1,367,189	6,059,835	54 and over but under 63.....	9	10	315	239,321	647,113
63 and over.....	7	9	534	463,100	1,331,010	63 and over.....	1	1			
GRANITE, total <sup>1</sup> .....	26	28	1,261	1,029,084	2,192,813	MARBLE, total <sup>1</sup> .....	4	4	283	231,923	740,162
40.....	2	2				Over 48 but under 54.....	2	2	283	231,923	740,162
44 and over but under 48.....	11	12	747	650,684	1,356,529	54 and over but under 63.....	2	2			
Over 48 but under 54.....	7	7	335	259,882	511,110	BARITE, total.....	5	6	205	200,345	626,401
54 and over but under 63.....	6	7	179	118,518	325,174	54 and over but under 63.....	4	5	205	200,345	626,401
						63 and over.....	1	1			

<sup>1</sup> See headnote.

**TABLE 5.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929**

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	74	5	16	23	13	9	8
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	35,515	75	804	3,841	4,684	6,561	19,550
Prime movers, total horsepower.....	18,292	60	548	1,753	1,956	1,836	12,139
Steam engines—							
Number.....	107	3	13	26	14	17	34
Horsepower.....	6,823	45	398	1,015	1,185	1,430	2,750
Steam turbines—							
Number.....	7						7
Horsepower.....	8,558						8,558
Internal-combustion engines—							
Number.....	45	1	4	14	6	8	12
Horsepower.....	2,511	15	160	738	371	406	831
Water wheels and water turbines—							
Number.....	2				2		
Horsepower.....	400				400		
Horsepower rating of inactive prime movers, included above.....	4,270			75	330		3,865
Electric motors driven by purchased energy—							
Number.....	408	1	16	92	54	211	124
Horsepower.....	17,223	15	256	2,088	2,728	4,725	7,411
Electric motors driven by energy generated by enterprises reporting:							
Number.....	144				23		121
Horsepower.....	2,875				985		1,890
Electric generators:							
Number.....	10				4	1	5
Kilowatts.....	2,129				787	7	1,335

<sup>1</sup> No power equipment was reported by 5 enterprises.

MINES AND QUARRIES—GEORGIA

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.	3,727	<b>3,476</b>	3,554	3,614	3,708	3,962	3,937	3,998	3,892	<b>3,759</b>	3,630	3,677	3,513	86.9
Granite.....	1,265	<i>1,086</i>	1,097	1,098	1,157	1,358	1,383	1,404	1,393	1,361	1,331	1,314	1,200	77.4
Clay.....	707	765	768	829	822	884	833	813	781	737	742	803	823	88.4
Limestone.....	315	271	333	341	332	363	338	324	338	336	289	200	224	61.7
Marble.....	286	287	285	279	286	284	290	291	284	293	283	278	281	94.6
Barite.....	205	263	231	230	259	240	225	228	200	200	179	134	133	50.0
Iron ore.....	122	121	123	120	119	127	127	120	181	129	126	109	106	80.9
Sand and gravel.....	62	54	57	62	61	64	65	70	63	62	57	69	60	77.1
Miscellaneous minerals.....	33	31	32	30	34	34	31	34	33	32	32	34	34	88.2
Other industries.....	642	598	628	625	638	658	645	705	654	630	635	646	646	84.8

TABLE 7.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Two of the "Other industries," however, were of greater importance in the State than some of the industries shown separately]

	Total	Granite	Clay	Marble	Limestone	Barite	Iron ore	Sand and gravel	Miscellaneous minerals	Other industries
Number of enterprises <sup>1</sup> .....	79	28	9	5	10	5	3	5	3	11
Number of mines and quarries.....	86	30	11	5	11	6	4	5	3	11
Persons engaged in industry, total (all classes).....	4,032	1,371	847	293	346	219	132	82	38	704
Proprietors and firm members.....	31	22	6	6	3	3	4	3	2	17
Principal salaried officers of corporations <sup>2</sup> .....	67	20	6	1	8	3	4	6	2	17
Other salaried officers and employees <sup>3</sup> .....	207	64	38	6	23	11	6	11	3	45
Wage earners (average for the year).....	3,727	1,265	797	286	315	206	122	62	33	642
Principal expenses:										
Salaries and wages—										
Principal officers of corporations <sup>4</sup> .....	\$247,852	\$38,309	\$23,820	\$1,200	\$32,000	\$20,000	\$6,000	\$14,463	\$2,700	\$57,860
Other salaried officers and employees <sup>4</sup> .....	\$430,644	\$126,086	\$100,409	\$13,408	\$42,194	\$28,563	\$9,400	\$14,346	\$10,200	\$80,848
Wage earners.....	\$2,944,216	\$1,033,884	\$589,349	\$234,623	\$239,321	\$200,345	\$94,333	\$46,056	\$24,014	\$482,286
Contract work.....	\$346,259		\$1,168							\$345,091
Supplies.....	\$974,964	\$225,776	\$315,733	\$10,910	\$108,436	\$75,426	\$31,061	\$18,086	\$3,372	\$176,214
Fuel.....	\$546,873	\$47,164	\$180,963	\$25,507	\$28,408	\$28,714	\$25,697	\$20,346	\$10,976	\$178,098
Purchased electric energy.....	\$268,786	\$61,253	\$62,987	\$18,250	\$10,758	\$45,126	\$7,048	\$6,668	\$8,250	\$39,546
Expenditures for development (included above in "Principal expenses").....	\$171,000	\$61,000	\$18,000		\$10,000					\$82,000
Value of products.....	\$9,611,219	\$2,201,313	\$2,161,812	\$749,737	\$847,113	\$626,401	\$220,354	\$172,087	\$170,155	\$2,662,247
Machinery and other equipment purchased during the year, total cost.....	\$187,744	\$41,711	\$25,307	\$10,000	\$19,673	\$20,547		\$7,392		\$63,114
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	35,515	7,497	3,581	2,693	10,484	2,647	673	1,120	475	6,336
Prime movers, total horsepower <sup>5</sup> .....	18,292	2,818	1,295	40	8,848	460	463	729	225	3,414
Steam engines—										
Number.....	107	18	23	1	7	10	13	3	2	30
Horsepower.....	6,323	1,507	1,180	20	690	310	443	375	225	2,073
Steam turbines—										
Number.....	7				5					2
Horsepower.....	3,568				7,758					800
Internal-combustion engines—										
Number.....	45	17	4	1	3		1	9		10
Horsepower.....	2,511	1,311	115	20	150		20	354		541
Water wheels and water turbines—										
Number.....	2				1		1			
Horsepower.....	400				250		150			
Electric motors driven by purchased energy—										
Number.....	498	85	180	17	43	56	6	8	6	97
Horsepower.....	17,223	4,679	2,286	2,653	1,636	2,187	210	400	250	2,922
Electric motors driven by energy generated by enterprises reporting:										
Number.....	144				24			5		115
Horsepower.....	2,875				1,210			355		1,310
Electric generators: <sup>6</sup>										
Number.....	10	1			5			1		3
Kilowatts.....	2,129	7			972			250		900
Fuel and electric energy consumed:										
Fuel—										
Coal—										
Anthracite..... tons, 2,240 pounds.....	1,317	2						10	1,300	5
Bituminous..... tons, 2,000 pounds.....	97,018	10,866	41,753	3,742	12,025	5,684	6,061	2,799	864	7,634
Coke..... tons, 2,000 pounds.....	1,815									1,815
Fuel oils..... gallons.....	3,906,965	103,866		8,000					40,614	3,751,485
Gasoline and kerosene..... gallons.....	154,737	23,895	5,700		23,404	7,982	3,000	48,462		42,394
Electric energy—										
Purchased..... kw.-hours.....	20,581,806	2,726,791	5,198,533	1,738,022	1,803,504	4,256,100	502,346	262,000	919,650	3,157,860
Generated by enterprises reporting..... kw.-hours.....	5,880,429				1,891,290			1,061,750		2,427,389

<sup>1</sup> Mineral pigments.

<sup>2</sup> Asbestos, 1 enterprise; coal, bituminous, 1; fuller's and filtering earths, 2; manganese, 1; minor metals (bauxite), 2; slate, 1; talc, 3.

<sup>3</sup> See GENERAL EXPLANATIONS—F. Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> Includes 4,276 horsepower for inactive prime movers.

<sup>6</sup> Includes 307 kilowatts for inactive generators.

## IDAHO

On the basis of the industries canvassed for 1929, Idaho ranked twenty-fourth among the States in value of mineral products and twenty-eighth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) The value of products, as shown in Table 1, was 75.2 per cent greater in 1929 than in 1919. The lead and the zinc mining industries together reported an increase of \$9,111,700 (Table 2), while the combined value of products for all other industries declined.

Statistics for nonproducing (development only) enterprises are given in Table 3 and are not included in any of the other tables shown.

The corporation was the dominant form of organization among enterprises in the mining industries in Idaho in 1929. As shown in Table 4, corporations operated 76.7 per cent of all enterprises, employed 98.7 per cent of the wage earners, and produced 99.1 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 5 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises employing wage earners in Idaho, 84.7 per cent were in classes having not more than 100 wage earners. These enterprises employed only 28.8 per cent of the total number of wage earners and contributed 18.7 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 6, show that the "54 and over but under 63" hours-per-week class predominated, while the 48-hour week ranked second.

Table 7 gives power-equipment figures for enterprises classified according to horsepower rating. Of

the aggregate horsepower shown, 3 enterprises in the "5,000 or more" group reported 42,355 horsepower, or 63.1 per cent. This amount, together with 12,899 horsepower reported by 9 enterprises in the "1,000-2,499" group, represents 82.3 per cent of the total shown.

The statistics for wage earners presented in Table 8, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 9 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The lead-mining industry ranked first in the State, accounting for 83.9 per cent of the total product, and Idaho ranked second among the States in 1929 in the lead industry, contributing 25.8 per cent of the total value of products for the industry in the United States.

The value of products of the metal-mining industries is the value of the ores or concentrates—in other words, the mine and mill products. The smelting and refining operations and the value of the metals—the final products—are reported by the census of manufactures.

The classification of metal mines, by industries, was determined by the metal of chief value. Therefore, the value of products of the zinc-mining industry, for example, represents the value of products for those enterprises classified in that industry, and does not include the mine value of zinc contained in the ore or concentrates produced by other metal-mining industries.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES		Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES		Per cent of increase or decrease (—)
	1929	1919			1929	1919	
Number of enterprises <sup>2</sup> .....	60	82	(3)	Principal expenses: <sup>6</sup>			
Number of mines and quarries.....	65	83	(3)		Salaries.....	\$668,870	\$538,071
Persons engaged, total.....	4,505	2,759	63.3	Wages.....	7,420,255	4,201,624	76.6
Proprietors and firm members.....	22	83	(3)	Contract work.....	124,127	193,657	-35.9
Salaried employees.....	4,257	221	16.3	Supplies and materials.....	3,486,590	2,026,256	72.1
Wage earners (average for the year) <sup>3</sup> .....	4,226	2,455	72.1	Fuel.....	166,718	159,294	4.7
Power equipment (total horsepower).....	67,295	31,050	116.7	Purchased electric energy.....	844,304	354,484	133.2
				Value of products <sup>7</sup> .....	20,745,615	11,840,301	75.2

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Per cent not computed where base is less than 100.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

## MINES AND QUARRIES—IDAHO

TABLE 2.—COMBINED SUMMARY FOR THE LEAD AND ZINC MINING INDUSTRIES: 1929 AND 1919

	1929	1919	Per cent of increase or decrease (-)		1929	1919	Per cent of increase or decrease (-)	
Number of enterprises <sup>1</sup> .....	34	20	(?)	Principal expenses—Continued.				
Number of mines.....	39	21	(?)		Contract work.....	\$69,659	\$156,769	-55.6
Wage earners (average for the year) <sup>2</sup> .....	3,648	1,820	100.4		Supplies and materials.....	2,952,036	1,558,808	-39.4
Power equipment (total horsepower).....	59,579	25,429	134.3		Fuel.....	108,728	118,176	-8.0
Principal expenses: <sup>4</sup>				Purchased electric energy.....	768,690	280,312	174.2	
Salaries.....	\$513,707	\$403,031	27.5	Value of products.....	18,641,423	9,529,723	95.6	
Wages.....	6,430,491	3,251,942	98.3					

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> Per cent not computed where base is less than 100.  
<sup>3</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>4</sup> See GENERAL EXPLANATIONS—Expenses.  
<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—SUMMARY FOR NONPRODUCING ENTERPRISES: 1929

	1929		1929	
Number of enterprises.....	93	Principal expenses—Continued.		
Number of mines.....	101		Contract work.....	\$181,093
Wage earners (average for the year).....	551		Supplies, fuel, and purchased electric energy.....	349,302
Power equipment (total horsepower).....	5,330		Expenditures for development (included above in "Principal expenses").....	1,428,368
Principal expenses:				
Salaries.....	\$132,152			
Wages.....	833,693			

TABLE 4.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	60	65	4,226	\$20,745,615	ZINC, total.....	6	7	450	\$1,240,562
Corporations.....	46	51	4,172	20,565,040	Corporations.....	6	7	450	1,240,562
Other <sup>1</sup> .....	14	14	54	180,575	COPPER, total.....	4	4	163	523,014
LEAD, total.....	28	32	3,189	17,400,801	Corporations <sup>2</sup> .....	4	4	163	523,014
Corporations.....	24	28	3,172	17,350,515					
Other <sup>1</sup> .....	4	4	17	44,346					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.  
<sup>2</sup> Includes 1 other form of organization.

TABLE 5.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total <sup>3</sup> .....	59	64	4,226	\$7,420,255	\$20,740,153	ZINC, total.....	6	7	459	\$692,602	\$1,240,562
Not reported.....	1	1				6 to 20.....	1	1			
1 to 5.....	18	18	50	63,218	205,546	21 to 50.....	1	2			
6 to 20.....	12	14	132	222,940	287,371	51 to 100.....	3	3	459	602,602	1,240,562
21 to 50.....	9	10	314	538,513	1,035,297	101 to 250.....	1	1			
51 to 100.....	10	10	723	1,150,460	2,351,583	GOLD (LODE AND PLACER) AND SILVER, total.....	10	10	312	506,445	1,235,625
101 to 250.....	6	6	955	1,506,801	3,598,022	Not reported.....	1	1			
251 to 500.....	1	1				1 to 5.....	2	2	7	10,211	19,890
501 to 1,000.....	2	4	2,052	3,872,314	13,262,304	6 to 20.....	4	4	45	71,853	78,305
LEAD, total <sup>3</sup> .....	27	31	3,189	5,787,880	17,395,399	21 to 50.....	1	1			
1 to 5.....	5	5	10	16,297	59,399	51 to 100.....	1	1	260	424,881	1,136,924
6 to 20.....	5	7	47	70,321	115,615	101 to 250.....	1	1			
21 to 50.....	6	6	208	379,827	577,540	COPPER, total.....	4	4	163	279,307	523,014
51 to 100.....	5	5	376	651,844	1,639,457	1 to 5.....	1	1			
101 to 250.....	3	3	406	797,786	1,741,024	6 to 20.....	1	1			
251 to 500.....	1	1				21 to 50.....	1	1	163	279,307	523,014
501 to 1,000.....	2	4	2,052	3,872,314	13,262,304	101 to 250.....	1	1			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>3</sup> Exclusive of 1 enterprise employing no wage earners.

# MINES AND QUARRIES—IDAHO

**TABLE 6.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Idaho was 4, distributed as follows: Copper, 1; lead, 2; sandstone, 1. The combined value of products represented by these enterprises was \$31,339]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	56	61	4, 204	\$7, 395, 743	\$20, 714, 276	ZINC, total.....	6	7	459	\$692, 692	\$1, 240, 562
Not reported.....	1	1				48.....	1	2	237	391, 522	802, 484
48.....	19	22	1, 283	2, 267, 389	6, 097, 256	Over 48 but under 54.....	2	2			
Over 48 but under 54.....	10	10	1, 269	2, 222, 009	6, 189, 139	54 and over but under 63.....	3	3	222	301, 080	438, 078
54 and over but under 63.....	23	25	1, 617	2, 840, 095	7, 322, 651						
63 and over.....	3	3	36	66, 250	205, 230	GOLD (LODE AND PLACER) AND SILVER, total.....	10	10	312	506, 445	1, 235, 625
LEAD, total <sup>1</sup> .....	26	30	3, 175	5, 770, 889	17, 378, 201	48.....	3	3	110	177, 802	261, 241
Not reported.....	1	1				Over 48 but under 54.....	1	1			
48.....	7	9	1, 103	1, 984, 761	6, 343, 003	54 and over but under 63.....	5	5	202	328, 643	974, 384
Over 48 but under 54.....	6	6	1, 008	1, 789, 228	5, 471, 477	63 and over.....	1	1			
54 and over but under 63.....	11	13	1, 064	1, 996, 900	5, 563, 721	COPPER, total <sup>1</sup> .....	3	3	158	274, 878	519, 928
63 and over.....	1	1				54 and over but under 63.....	3	3	158	274, 878	519, 928

<sup>1</sup> See headnote.

**TABLE 7.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929**

[This table does not include data for 4 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 detailed power-equipment information. Of the 56 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 5]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—						
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	5,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	51	4	9	8	8	10	9	3
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	67, 121	77	422	1, 318	2, 738	7, 312	12, 899	42, 355
Prime movers, total horsepower.....	9, 079	67	287	415	400	3, 120	1, 000	3, 700
Steam engines—								
Number.....	6		1			5		
Horsepower.....	852		12			840		
Steam turbines—								
Number.....	2							2
Horsepower.....	2, 000							2, 000
Internal-combustion engines—								
Number.....	23	4	7	6	4	2		
Horsepower.....	1, 789	67	207	415	400	700		
Water wheels and water turbines—								
Number.....	17		3			5	4	5
Horsepower.....	4, 438		68			1, 580	1, 000	1, 790
Horsepower rating of inactive prime movers, included above.....	2, 250	22	6	20			250	1, 958
Electric motors driven by purchased energy—								
Number.....	1, 787	1	8	33	65	133	257	1, 290
Horsepower.....	53, 042	10	135	903	2, 338	4, 192	11, 899	33, 566
Electric motors driven by energy generated by enterprises reporting:								
Number.....	79					79		
Horsepower.....	1, 390					1, 300		
Electric generators:								
Number.....	12			1		9		2
Kilowatts.....	2, 036			15		1, 656		365

<sup>1</sup> See headnote.

<sup>2</sup> See Table 9 for total horsepower rating of power equipment for all enterprises.

**TABLE 8.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929**

[The month of maximum employment 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 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, total.....	4, 226	4, 133	<b>3, 927</b>	4, 145	4, 249	4, 327	4, 412	4, 423	4, 412	4, 249	4, 142	4, 209	4, 089	88.8
Lead.....	3, 180	3, 325	3, 089	3, 208	3, 187	3, 233	3, 303	3, 329	3, 346	3, 187	<b>2, 977</b>	3, 067	3, 013	89.0
Zinc.....	459	<i>311</i>	328	392	474	469	521	500	460	531	509	503	59.1	
Gold (lode and placer) and silver.....	312	263	257	284	350	343	326	323	317	318	343	340	311	73.8
Copper.....	163	161	163	176	170	158	<i>142</i>	159	153	160	170	174	187	80.7
Basalt.....	22		5		5	25	25	24	25	42	44	46	24	10.9
Granite and sandstone.....	5	3	3	5	8	6	5	5	4	4	5	5	3	37.5
Other industries.....	76	77	82	80	76	91	89	83	67	69	73	70	68	73.6

## MINES AND QUARRIES—IDAHO

TABLE 9.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. One of the "Other industries," however, was of greater importance in the State than one of the industries shown separately.]

	Total	Lead <sup>1</sup>	Zinc	Gold (lode and placer) and silver <sup>2</sup>	Copper	Basalt	Granite and sandstone <sup>3</sup>	Other industries <sup>4</sup>
Number of enterprises <sup>5</sup> .....	60	28	6	10	4	5	8	4
Number of mines and quarries.....	65	32	7	10	4	5	8	4
Persons engaged in industry, total (all classes).....	4,605	3,366	480	351	178	28	9	93
Proprietors and firm members.....	22	7	-----	3	4	4	3	1
Principal salaried officers of corporations <sup>6</sup> .....	30	16	-----	10	4	-----	-----	-----
Other salaried officers and employees <sup>6</sup> .....	227	154	21	26	7	2	1	16
Wage earners (average for the year).....	4,226	3,189	459	312	163	22	5	76
Principal expenses:								
Salaries and wages—								
Principal officers of corporations <sup>6</sup> .....	\$123,597	\$90,372	-----	\$21,900	\$11,325	-----	-----	-----
Other salaried officers and employees <sup>6</sup> .....	\$545,273	\$381,280	\$42,055	\$64,135	\$22,575	\$2,850	\$1,400	\$30,978
Wage earners.....	\$7,420,255	\$5,787,889	\$692,602	\$506,445	\$279,307	\$33,776	\$4,283	\$115,953
Contract work.....	\$124,127	\$65,160	\$4,493	\$3,350	\$48,518	\$2,600	-----	-----
Supplies.....	\$3,486,690	\$2,581,180	\$420,858	\$323,632	\$126,400	\$16,208	\$1,185	\$67,129
Fuel.....	\$166,718	\$104,822	\$3,906	\$10,130	\$39,782	\$3,806	\$97	\$4,175
Purchased electric energy.....	\$844,304	\$701,540	\$87,150	\$51,201	\$6,931	\$1,240	\$163	\$10,083
Expenditures for development (included above in "Principal expenses").....	\$1,371,000	\$791,000	\$210,000	\$257,000	\$31,000	\$4,000	-----	\$78,000
Value of products.....	\$20,745,615	\$17,400,861	\$1,240,562	\$1,235,625	\$523,014	\$111,771	\$12,463	\$221,329
Machinery and other equipment purchased during the year, total cost.....	\$893,366	\$660,257	\$44,542	\$123,743	\$53,780	\$7,000	\$1,200	\$12,869
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	67,205	55,836	3,743	3,675	1,971	580	206	1,284
Prime movers, total horsepower <sup>7</sup> .....	9,079	5,987	750	700	1,090	505	22	25
Steam engines—								
Number.....	6	1	-----	1	4	-----	-----	-----
Horsepower.....	852	200	-----	12	640	-----	-----	-----
Steam turbines—								
Number.....	2	2	-----	-----	-----	-----	-----	-----
Horsepower.....	2,000	2,000	-----	-----	-----	-----	-----	-----
Internal-combustion engines—								
Number.....	23	9	-----	4	1	7	1	1
Horsepower.....	1,789	724	-----	63	450	505	22	25
Water wheels and water turbines—								
Number.....	17	10	3	4	-----	-----	-----	-----
Horsepower.....	4,438	3,063	750	625	-----	-----	-----	-----
Electric motors driven by purchased energy—								
Number.....	1,792	1,575	64	74	21	3	6	49
Horsepower.....	58,216	49,849	2,993	2,975	881	75	184	1,259
Electric motors driven by energy generated by enterprises reporting:								
Number.....	79	75	-----	2	2	-----	-----	-----
Horsepower.....	1,390	1,200	-----	175	15	-----	-----	-----
Electric generators: <sup>8</sup>								
Number.....	12	6	-----	2	3	1	-----	-----
Kilowatts.....	2,036	1,285	-----	400	386	15	-----	-----
Fuel and electric energy consumed:								
Fuel—								
Coal, bituminous..... tons, 2,000 pounds.....	21,813	11,886	370	1,224	7,573	-----	-----	760
Coke..... tons, 2,000 pounds.....	310	143	15	-----	150	-----	-----	2
Fuel oils..... gallons.....	247,785	175,726	-----	6,800	42,000	19,662	-----	4,597
Gasoline and kerosene..... gallons.....	32,325	10,652	-----	8,560	-----	10,776	300	2,037
Electric energy—								
Purchased..... kw.-hours.....	119,814,986	102,690,377	10,150,253	4,932,684	680,000	191,692	23,000	1,146,975
Generated by enterprises reporting..... kw.-hours.....	9,351,121	6,362,551	2,618,590	300,000	70,000	-----	-----	-----

<sup>1</sup> Includes 1 reduction mill for which separate report was received.

<sup>2</sup> Gold, lode, 7 enterprises; gold, placer, 2; silver, 1.

<sup>3</sup> Granite, 2 enterprises; sandstone, 1.

<sup>4</sup> Manganese, 1 enterprise; phosphate rock, 2; sand and gravel, 1.

<sup>5</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>6</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>7</sup> Includes 2,258 horsepower for inactive prime movers.

<sup>8</sup> Includes 1,875 kilowatts for inactive generators.

## ILLINOIS

On the basis of the industries canvassed for 1929, Illinois ranked third among the States in value of mineral products and fourth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 15.4 per cent less in 1929 than in 1919. This decrease is accounted for principally by the decline in the value of bituminous coal produced, for which comparative figures are given in Table 2.

The industries reported for 1929, ranked according to value of products, are shown in Table 3. The coal industry ranked first in the State, accounting for 86.2 per cent of the total product. This industry, together with the limestone and the sand and gravel industries, produced 96.3 per cent of the total. Illinois ranked third among the States in 1929 in the coal industry and sixth in each of the other two industries.

The corporate form of organization was most common among enterprises in the mining industries in Illinois in 1929. As shown in Table 4, corporations operated 62.8 per cent of all enterprises, employed 97.1 per cent of the wage earners, and produced 97.4 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 5 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in Illinois, 77.1 per cent were in classes having not more than 100 wage earners. These enterprises employed only 13.6 per cent of the total number of wage earners and contributed 19.5 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 6, show that the 48-hour week predominated, while the "25 and over but under 36" class ranked second. In the bituminous-coal industry 74.1 per cent of the wage earners were in the 48-hour-week class. In the limestone and the sand and gravel industries the longer working week predominated.

Table 7 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 67 enterprises in the 1,000–2,499 horsepower group reported 103,120 horsepower, or 23.8 per cent, while all enterprises reporting 1,000 horsepower or more accounted for 352,255 horsepower, or 81.4 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 8, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 9 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919 <sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919 <sup>2</sup>			1929		1919 <sup>2</sup>	
	All industries	Revised (for comparative purposes) <sup>3</sup>				All industries	Revised (for comparative purposes) <sup>3</sup>		
Number of enterprises <sup>4</sup> .....	533	464	530	—13.4					
Number of mines and quarries.....	562	486	590	—17.6	Principal expenses: <sup>6</sup>				
Persons engaged, total.....	56,302	54,389	80,803	—32.1	Salaries.....	\$6,741,951	\$5,803,700	\$9,381,398	—38.1
Proprietors and firm members.....	303	292	242	20.7	Wages.....	73,777,064	71,828,479	90,900,989	—21.0
Salaried employees.....	2,711	2,433	4,190	—41.9	Contract work.....	272,685	219,310	72,473	202.6
Wage earners (average for the year) <sup>5</sup> .....	53,378	52,164	76,371	—31.7	Supplies and materials.....	14,270,664	13,463,974	17,023,921	—20.9
Power equipment (total horsepower) ..	439,462	398,602	282,801	40.9	Fuel.....	2,401,224	1,920,803	4,658,443	—68.8
					Purchased electric energy.....	3,409,809	2,971,951	971,387	205.9
					Value of products <sup>7</sup> .....	132,948,261	124,771,725	147,409,502	—15.4

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

## MINES AND QUARRIES—ILLINOIS

TABLE 2.—SUMMARY FOR BITUMINOUS—COAL INDUSTRY: 1929 AND 1919

	1929	1919	Per cent of increase or decrease (—)		1929	1919	Per cent of increase or decrease (—)
Number of enterprises <sup>1</sup> .....	384	447	-14.1	Principal expenses—Continued			
Number of mines.....	401	439	-10.6	Fuel.....	\$1,674,287	\$4,154,744	-62.1
Wage earners (average for the year) <sup>2</sup> .....	49,817	73,780	-32.5	Purchased electric energy.....	\$2,601,524	\$668,142	287.9
Power equipment (total horsepower).....	343,128	247,142	38.8	Value of products, total.....	\$14,617,799	\$138,767,835	-17.4
Principal expenses: <sup>3</sup>				Coal:			
Salaries.....	\$4,812,163	\$8,553,695	-43.7	Quantity (tons, 2,000 pounds).....	60,705,000	60,831,000	0.6
Wages.....	\$68,922,106	\$87,796,328	-21.5	Value at mine.....	\$114,670,000	\$138,701,000	-17.4
Contract work.....	\$204,107	\$08,942	196.1	Other products.....	\$48,000	\$67,000	-28.4
Supplies and materials.....	\$12,116,662	\$15,345,498	-21.0				

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>3</sup> See GENERAL EXPLANATIONS—Expenses.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—PRINCIPAL INDUSTRIES RANKED IN ORDER OF VALUE OF PRODUCTS: 1929

INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products	INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products
All industries, total.....	533	562	53,378	\$132,948,261	Sand, molding.....	6	10	117	\$873,058
Coal, bituminous.....	384	401	49,817	114,617,700	Clay.....	10	11	102	210,503
Limestone.....	53	55	1,649	7,830,131	Stone, miscellaneous.....	4	5	37	210,137
Sand and gravel.....	61	62	860	5,576,819	Silica.....	5	5	42	128,641
Fluorspar.....	6	7	474	1,434,122	Other industries <sup>3</sup> .....	4	6	280	2,058,056

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>3</sup> Fuller's and filtering earths, 2 enterprises; sand, glass, 2. See headnote, Table 9.

TABLE 4.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	533	562	53,378	\$132,948,261	LIMESTONE, total.....	53	55	1,649	\$7,830,131
Corporations.....	335	361	51,819	120,522,223	Corporations.....	37	39	1,519	7,523,714
Other <sup>1</sup> .....	198	201	1,559	3,425,638	Other <sup>1</sup> .....	16	16	130	300,417
COAL, BITUMINOUS, total.....	384	401	49,817	114,617,700	SAND AND GRAVEL, total.....	61	62	860	5,576,819
Corporations.....	221	237	48,531	112,150,892	Corporations.....	52	53	790	5,302,295
Other <sup>1</sup> .....	163	164	1,286	2,466,907	Other <sup>1</sup> .....	9	9	70	274,524

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

TABLE 5.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	533	562	53,378	\$73,777,064	\$132,948,261	LIMESTONE, total.....	53	55	1,649	\$2,105,707	\$7,830,131
Not reported.....	2	2	432	492,017	1,050,714	1 to 5.....	13	14	40	42,057	103,668
1 to 5.....	143	145	1,690	2,215,551	6,202,092	6 to 20.....	12	12	131	147,764	528,051
6 to 20.....	154	157	2,443	3,532,035	9,213,789	21 to 60.....	19	19	613	690,612	3,309,185
21 to 60.....	72	75	3,630,095	9,462,711	24,444,824	61 to 100.....	7	8	865	1,024,674	3,888,337
61 to 100.....	40	45	9,721	13,425,114	25,062,319	101 to 250.....	1	1			
101 to 250.....	58	63	11,986	16,316,504	23,950,315	251 to 500.....	1	1			
251 to 500.....	34	36	17,133	23,950,315	17,262,028	SAND AND GRAVEL, total.....	61	62	860	1,300,045	5,576,819
501 to 1,000.....	25	28	7,258	10,233,933		1 to 5.....	11	11	41	59,721	227,245
1,001 to 2,500.....	5	12				6 to 20.....	39	40	442	712,733	2,072,724
COAL, BITUMINOUS, total.....	384	401	49,817	68,922,106	114,617,700	21 to 50.....	10	10			
1 to 5.....	114	114	338	377,942	662,632	51 to 100.....	1	1	377	626,591	2,370,850
6 to 20.....	94	84	876	1,063,871	1,698,011						
21 to 50.....	41	42	1,445	2,038,670	3,424,856						
51 to 100.....	25	30	1,962	2,641,608	4,693,220						
101 to 250.....	54	57	9,119	12,749,454	22,050,773						
251 to 500.....	33	34	11,086	15,956,504	24,672,704						
501 to 1,000.....	25	28	17,133	23,950,315	40,213,579						
1,001 to 2,500.....	5	12	7,258	10,233,933	17,262,028						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

# MINES AND QUARRIES—ILLINOIS

111

**TABLE 6.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Illinois was 173, distributed as follows: Coal, bituminous, 160; limestone, 2; stone, miscellaneous, 2. The combined value of products represented by these enterprises was \$1,453,876.]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
<b>ALL INDUSTRIES, total</b> <sup>1</sup> .....	360	389	52,507	\$72,786,279	\$131,494,385	<b>COAL, BITUMINOUS—Con.</b>					
Not reported.....	2	2				48.....	159	171	36,285	\$51,076,855	\$85,962,084
Under 25.....	15	16	3,085	2,969,608	4,450,924	54 and over but under 63.....	4	4	537	771,604	1,770,778
25 and over but under 36.....	24	27	7,768	10,563,607	17,077,683	<b>LIMESTONE, total</b> <sup>1</sup> .....	51	53	1,646	2,102,307	7,822,068
36 and over but under 40.....	1	1	989	1,464,408	2,251,260	44 and over but under 48.....	3	3	12	12,754	40,545
40.....	8	9	345	522,083	1,566,565	48.....	12	12	289	417,200	1,734,379
Over 40 but under 44.....	3	3	215	274,633	831,325	Over 48 but under 54.....	3	4	3	1,345	1,672,203
44 and over but under 48.....	9	9	30,905	52,551,485	80,217,378	54 and over but under 63.....	30	31	3		6,047,244
48.....	185	200	125	171,813	544,725	63 and over.....	3	3			
Over 48 but under 54.....	8	10	3,075	4,268,642	15,445,516	<b>SAND AND GRAVEL, total</b> .....	61	62	860	1,399,045	5,576,819
54 and over but under 63.....	102	109				40.....	1	1	36	41,715	251,182
63 and over.....	3	3				44 and over but under 48.....	2	2			
<b>COAL, BITUMINOUS, total</b> <sup>1</sup> .....	215	232	48,965	67,952,176	113,197,220	48.....	4	4	37	65,325	284,094
Under 25.....	15	16	3,085	2,969,608	4,444,424	Over 48 but under 54.....	2	2			
25 and over but under 36.....	23	26	7,750	10,555,864	17,061,254	54 and over but under 63.....	52	53	787	1,292,005	5,040,943
36 and over but under 40.....	1	1	977	1,452,693	2,217,189						
40.....	7	8	322	525,552	1,741,491						
Over 40 but under 44.....	2	2									
44 and over but under 48.....	4	4									

<sup>1</sup> See headnote.

**TABLE 7.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929**

[This table does not include data for 173 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 detailed power-equipment information. Of the 360 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 7.]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—								
		Less than 25	25 to 90	100 to 240	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	5,000 to 9,999	10,000 or more
		Number of enterprises reporting power equipment <sup>1</sup> .....	353	12	45	53	67	65	67	25
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	432,465	200	2,718	3,515	22,618	46,159	103,120	88,713	82,131	78,201
<b>Prime movers, total horsepower</b> .....	170,423	106	902	4,700	12,003	22,137	54,317	33,463	20,304	31,491
<b>Steam engines—</b>										
Number.....	882	4	21	60	114	182	263	147	40	51
Horsepower.....	137,131	78	710	3,024	10,490	20,807	44,163	31,912	13,046	12,301
<b>Steam turbines—</b>										
Number.....	36				1	1	12	2	0	11
Horsepower.....	31,981				93	10	5,710	20	7,288	18,800
<b>Internal-combustion engines—</b>										
Number.....	174	4	9	27	25	25	65	14		5
Horsepower.....	10,311	28	192	1,076	1,420	1,320	4,444	1,531		300
Horsepower rating of inactive prime movers, included above.....	19,581			191	75	1,149	2,984	969	2,477	11,736
<b>Electric motors driven by purchased energy—</b>										
Number.....	7,023	20	126	201	408	723	1,284	1,474	1,554	1,233
Horsepower.....	253,042	94	1,816	3,815	10,615	24,022	48,803	55,250	61,827	46,800
<b>Electric motors driven by energy generated by enterprises reporting:</b>										
Number.....	3,175		1	10	104	426	1,451	351	400	432
Horsepower.....	78,497		150	352	2,321	8,389	34,328	10,903	11,448	10,106
<b>Electric generators:</b>										
Number.....	172		7	7	14	28	58	28	14	16
Kilowatts.....	45,464		249	1,050	2,522	4,085	16,310	6,425	7,150	7,663

<sup>1</sup> See headnote.

<sup>2</sup> See Table 9 for total horsepower rating of power equipment for all enterprises.

**TABLE 8.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929**

[The month of maximum employment 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum is of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
<b>All industries, total</b> .....	53,378	<b>59,434</b>	53,923	58,856	49,347	47,225	<i>46,033</i>	48,200	50,302	53,809	55,971	56,543	55,343	77.5
Coal, bituminous.....	49,817	<b>56,809</b>	56,266	55,811	45,635	43,219	<i>41,632</i>	44,057	46,693	49,770	52,095	52,074	52,548	73.8
Limestone.....	1,049	<b>1,266</b>	1,289	1,390	1,718	1,855	1,917	1,915	1,882	1,831	1,741	1,648	1,338	66.0
Sand and gravel.....	360	<b>388</b>	412	649	971	1,066	1,119	1,076	1,058	1,093	1,054	878	551	34.7
Fluorspar.....	474	<b>445</b>	<i>409</i>	435	445	405	502	630	530	497	436	484	434	77.2
Sand, molding.....	117	<b>68</b>	70	100	125	126	136	143	162	148	124	124	76	42.0
Clay.....	102	<b>98</b>	100	98	100	103	111	107	103	101	104	107	37	78.4
Silica.....	42	<b>58</b>	60	58	37	37	36	35	37	37	51	43	40	51.7
Stone, miscellaneous.....	37	<b>38</b>	40	41	44	44	42	42	50	30	27	24	21	42.0
Other industries.....	280	<b>264</b>	268	274	238	236	238	295	293	308	289	260	248	80.5

## MINES AND QUARRIES—ILLINOIS

TABLE 9.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Each of the "Other industries," however, was of greater importance in the State than some of the industries shown separately]

	Total	Coal, bituminous	Limestone	Sand and gravel	Fluorspar	Sand, molding	Clay	Stone, miscellaneous	Silica <sup>1</sup>	Other industries <sup>2</sup>
Number of enterprises <sup>3</sup> .....	533	384	53	61	6	6	10	4	5	4
Number of mines and quarries.....	502	401	55	62	7	10	11	5	5	6
Persons engaged in industry, total (all classes).....	56,302	52,106	1,801	1,103	537	137	118	44	54	312
Proprietors and firm members.....	303	285	14	9	5	2	7	1	-----	-----
Principal salaried officers of corporation <sup>4</sup> .....	340	212	40	64	7	7	2	2	-----	6
Other salaried officers and employees <sup>4</sup> .....	2,362	1,902	179	170	51	11	7	4	12	26
Wage earners (average for the year).....	53,378	49,817	1,649	860	474	117	102	37	42	280
Principal expenses:										
Salaries and wages—										
Principal officers of corporations <sup>4</sup> .....	\$1,843,131	\$906,551	\$417,325	\$383,596	\$25,500	\$30,199	\$10,500	\$4,060	-----	\$58,800
Other salaried officers and employees <sup>4</sup> .....	\$4,898,820	\$3,905,612	\$362,225	\$378,538	\$112,021	\$32,712	\$10,945	\$8,700	\$19,204	\$68,863
Wage earners.....	\$73,777,064	\$68,922,106	\$2,105,707	\$1,399,045	\$563,024	\$193,358	\$98,675	\$41,151	\$47,464	\$406,534
Contract work.....	\$272,685	\$204,107	\$5,278	\$51,875	\$9,925	\$1,500	-----	-----	-----	-----
Supplies.....	\$14,270,664	\$12,115,662	\$928,207	\$627,256	\$244,682	\$44,027	\$13,226	\$52,113	\$23,581	\$221,910
Fuel.....	\$2,401,224	\$1,574,287	\$236,896	\$356,704	\$70,758	\$68,818	\$5,341	\$2,394	\$16,833	\$129,188
Purchased electric energy.....	\$3,409,809	\$2,591,524	\$342,533	\$320,498	\$9,317	\$26,751	\$7,910	-----	\$4,754	\$106,522
Expenditures for development (included above in "Principal expenses").....	\$2,789,000	\$2,608,000	\$16,000	-----	\$83,000	-----	\$2,000	-----	-----	\$20,000
Value of products.....	\$132,048,261	\$114,617,799	\$7,830,131	\$5,576,819	\$1,434,122	\$873,053	\$219,503	\$210,137	\$128,641	\$2,058,056
Machinery and other equipment purchased during the year, total cost.....	\$8,239,736	\$7,491,521	\$288,581	\$324,306	\$60,811	\$20,500	\$7,408	\$1,115	\$8,494	\$37,000
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	439,462	343,128	50,423	35,954	2,379	1,505	603	406	794	3,765
Prime movers, total horsepower <sup>5</sup> .....	184,273	138,157	24,726	16,563	2,763	817	216	341	670	20
Steam engines—										
Number.....	1,046	780	101	109	19	19	3	5	10	-----
Horsepower.....	141,981	114,095	10,571	13,019	2,670	685	170	141	630	-----
Steam turbines—										
Number.....	36	30	3	1	-----	-----	-----	-----	-----	2
Horsepower.....	31,981	19,801	12,150	10	-----	-----	-----	-----	-----	20
Internal-combustion engines—										
Number.....	174	63	34	57	5	8	1	4	2	-----
Horsepower.....	10,311	4,261	2,005	3,534	93	132	46	200	40	-----
Electric motors driven by purchased energy—										
Number.....	7,189	5,847	625	429	15	25	43	3	7	175
Horsepower.....	255,139	204,971	25,702	19,391	116	688	387	65	124	3,745
Electric motors driven by energy generated by enterprises reporting:										
Number.....	3,175	3,034	-----	-----	91	-----	-----	-----	-----	-----
Horsepower.....	78,497	76,394	-----	-----	2,103	-----	-----	-----	-----	-----
Electric generators: <sup>6</sup>										
Number.....	172	165	-----	-----	7	-----	-----	-----	-----	-----
Kilowatts.....	45,454	43,911	-----	-----	1,543	-----	-----	-----	-----	-----
Fuel and electric energy consumed:										
Fuel—										
Coal—										
Anthracite..... tons, 2,240 pounds.....	1,886	-----	1,375	11	-----	-----	-----	-----	-----	-----
Bituminous..... tons, 2,000 pounds.....	1,160,205	950,260	54,759	67,961	23,531	19,060	1,709	432	6,984	35,500
Fuel oils..... gallons.....	725,071	164,499	44,640	244,720	-----	2,350	-----	20,000	225	248,637
Gasoline and kerosene..... gallons.....	771,807	186,962	177,399	274,780	101,436	15,720	1,000	1,510	-----	13,000
Electric energy—										
Purchased..... kw.-hours.....	184,265,217	140,223,808	10,002,557	15,772,267	180,340	1,336,374	383,138	-----	221,015	6,539,658
Generated by enterprises reporting..... kw.-hours.....	41,556,584	38,204,595	-----	-----	3,351,999	-----	-----	-----	-----	-----

<sup>1</sup> Gansler, 1 enterprise; silica rock, 1; tripoli, 3.

<sup>2</sup> Fuller's and filtering carths, 2 enterprises; sand, glass, 2.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> Includes 19,581 horsepower for inactive prime movers.

<sup>6</sup> Includes 11,653 kilowatts for inactive generators.

# INDIANA

On the basis of the industries canvassed for 1929, Indiana ranked thirteenth among the States in value of mineral products and eighth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis the value of products, as shown in Table 1, was 11.8 per cent less in 1929 than in 1919. This decrease is accounted for principally by the decline in the value of bituminous coal produced, for which comparative figures are given in Table 2.

The industries reported for 1929, ranked according to value of products, are shown in Table 3. The coal industry ranked first in the State, accounting for 64.3 per cent of the total products. This industry, together with the limestone and the sand and gravel industries, produced 98.4 per cent of the total. Indiana ranked seventh among the States in 1929 in the coal industry, second in the limestone industry, and eighth in the sand and gravel industry.

The corporate form of organization was most important among enterprises in the mining industries in Indiana in 1929. As shown in Table 4, corporations operated 49.4 per cent of all enterprises, employed 92 per cent of the wage earners, and produced 92.4 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 5 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises employing wage earners in Indiana, 82.1 per cent were in classes having not more than 50 wage earners. These enterprises employed only 21.4 per cent of the total number of wage earners and contributed 25.4 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 6, show that the 48-hour week predominated, while the "54 and over but under 63" class ranked second. In the bituminous-coal industry 83.5 per cent of the wage earners were in the 48-hour-week class. In the limestone and the sand and gravel industries the longer working week predominated.

Table 7 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 48 enterprises in the 1,000–2,499 horsepower group reported 75,999 horsepower, or 41.4 per cent. This amount, together with 37,996 horsepower reported by 5 enterprises in the 5,000–9,999 group, and 31,013 horsepower reported by 45 enterprises in the 500–999 group, represents 79 per cent of the aggregate shown.

The statistics for wage earners presented in Table 8, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 9 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919 <sup>2</sup>			1929		1919 <sup>2</sup>	
	All industries	Revised (for comparative purposes) <sup>3</sup>				All industries	Revised (for comparative purposes) <sup>3</sup>		
Number of enterprises <sup>4</sup> .....	399	335	372	-9.9	Power equipment (total horsepower).....	188,735	156,045	121,904	28.4
Number of mines and quarries.....	452	375	398	-5.8	Principal expenses: <sup>5</sup>				
Persons engaged, total.....	18,270	17,301	23,094	-38.4	Salaries.....	\$3,073,010	\$2,501,323	\$3,015,586	-34.6
Proprietors and firm members.....	295	278	216	28.7	Wages.....	29,375,698	22,548,717	29,717,136	-24.8
Salaried employees.....	1,242	1,055	1,530	-31.0	Contract work.....	113,785	75,040	125,651	-40.8
Wage earners (average for the year) <sup>6</sup> .....	16,742	15,968	20,348	-39.4	Supplies and materials.....	5,144,408	4,723,515	6,008,578	-22.5
					Fuel.....	860,559	723,057	1,575,794	-55.9
					Purchased electric energy.....	1,878,634	1,409,101	271,308	441.4
					Value of products <sup>7</sup> .....	48,992,785	44,297,266	50,235,857	-11.8

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

MINES AND QUARRIES—INDIANA

TABLE 2.—SUMMARY FOR BITUMINOUS—COAL INDUSTRY: 1929 AND 1919

	1929	1919	Per cent of increase or decrease (-)		1929	1919	Per cent of increase or decrease (-)
Number of enterprises <sup>1</sup> .....	222	295	-24.7	Principal expenses—Continued			
Number of mines.....	235	317	-25.9	Fuel.....	\$510,387	\$1,455,123	-64.9
Wage earners (average for the year) <sup>2</sup> .....	12,800	24,479	-47.5	Purchased electric energy.....	\$289,841	\$159,146	821.8
Power equipment (total horsepower).....	106,803	94,685	7.3	Value of products, total.....	\$31,501,936	\$45,492,726	-30.8
Principal expenses: <sup>3</sup>				Coal:			
Salaries.....	\$1,501,009	\$3,389,039	-55.7	Quantity (tons, 2,000 pounds).....	18,025,000	20,505,000	-9.2
Wages.....	\$18,101,869	\$27,377,609	-35.1	Value at mine.....	\$31,478,000	\$45,453,000	-30.7
Contract work.....	\$43,245	\$103,326	-58.3	Other products.....	\$24,000	\$40,000	-40.0
Supplies and materials.....	\$3,718,903	\$5,379,460	-30.9				

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.    <sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>3</sup> See GENERAL EXPLANATIONS—Expenses.    <sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—PRINCIPAL INDUSTRIES RANKED IN ORDER OF VALUE OF PRODUCTS: 1929

INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products	INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products
All industries, total.....	309	452	16,742	\$48,902,786	Sand and gravel.....	58	71	738	\$4,452,720
Coal, bituminous.....	222	235	12,800	31,501,936	Stone, miscellaneous.....	15	16	129	303,730
Limestone.....	87	117	3,942	17,400,850	Sand, molding.....	6	6	36	242,800
					Other industries <sup>3</sup> .....	7	8	98	244,395

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.    <sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.    <sup>3</sup> Abrasive materials, 2 enterprises; clay, 6.

TABLE 4.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	309	452	16,742	\$48,902,786	LIMESTONE, total.....	87	117	3,942	\$12,247,106
Corporations.....	197	235	15,401	45,279,164	Corporations.....	46	63	2,432	10,855,681
Other <sup>1</sup> .....	202	217	1,341	3,713,622	Other <sup>1</sup> .....	45	53	399	1,391,515
COAL, BITUMINOUS, total.....	222	235	12,800	31,501,936	SAND AND GRAVEL, total.....	58	71	738	4,452,720
Corporations.....	101	114	12,175	30,293,739	Corporations.....	41	43	621	3,677,074
Other <sup>1</sup> .....	121	121	625	1,208,197	Other <sup>1</sup> .....	17	23	117	775,646

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

TABLE 5.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total <sup>3</sup> .....	307	450	16,742	\$23,375,038	\$48,986,186	LIMESTONE, total <sup>3</sup> .....	80	114	2,881	\$4,032,335	\$12,240,590
Not reported.....	1	1	455	513,753	1,458,900	1 to 5.....	25	26	75	82,937	209,826
1 to 5.....	157	162	1,063	1,326,981	4,111,839	6 to 20.....	20	33	335	351,444	1,109,466
6 to 20.....	104	113	2,004	2,503,490	6,865,145	21 to 50.....	25	32	327	1,084,547	3,387,742
21 to 50.....	64	76	1,985	2,901,615	6,108,219	51 to 100.....	5	5	306	467,539	1,285,837
51 to 100.....	28	35	3,646	5,089,349	12,627,642	101 to 250.....	4	11	1,338	2,045,868	6,242,725
101 to 250.....	23	31	5,907	8,203,853	12,358,671	501 to 1,000.....	1	7			
251 to 500.....	17	22	1,722	2,236,651	5,058,764	SAND AND GRAVEL, total.....	58	71	738	984,331	4,452,720
501 to 1,000.....	3	10				1 to 5.....	17	21	59	85,889	573,224
COAL, BITUMINOUS, total.....	222	235	12,800	18,101,859	31,501,936	6 to 20.....	31	35	325	474,403	2,019,092
1 to 5.....	98	98	268	288,152	592,636	21 to 50.....	8	10			
6 to 20.....	39	39	354	444,031	702,043	51 to 100.....	2	4	354	424,039	1,860,434
21 to 50.....	27	28	924	1,081,654	2,029,670						
51 to 100.....	20	25	1,477	2,203,437	4,068,235						
101 to 250.....	19	20	3,930	5,880,182	11,333,681						
501 to 1,000.....	2	3									
251 to 500.....	17	22	5,907	8,203,853	12,358,671						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.    <sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.    <sup>3</sup> Exclusive of 2 enterprises employing no wage earners.

MINES AND QUARRIES—INDIANA

TABLE 6.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Indiana was 150, distributed as follows: Coal, bituminous, 125; limestone, 22; stone, miscellaneous, 3. The combined value of products represented by these enterprises was \$1,136,866]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	248	206	16,163	\$22,728,504	\$47,855,920	LIMESTONE, total <sup>1</sup> .....	69	94	2,799	\$3,944,305	\$12,058,984
Not reported.....	1	1				40.....	1	1			
Under 25.....	3	3	383	524,133	980,810	48.....	4	4	108	112,967	368,096
25 and over but under 36.....	9	9	1,234	1,580,143	2,560,241	Over 48 but under 54.....	8	20	1,160	1,854,966	5,930,776
36 and over but under 40.....	2	2				54 and over but under 63.....	54	67	1,531	1,976,372	5,760,112
40.....	3	3	519	981,343	1,993,168	63 and over.....	2	2			
44 and over but under 48.....	2	3	10,593	14,904,205	26,614,374	SAND AND GRAVEL, total.....	58	71	738	984,331	4,452,720
48.....	92	105				40.....	5	6			
Over 48 but under 54.....	12	25	1,234	1,916,808	6,090,882	44 and over but under 48.....	1	2	166	268,428	953,422
54 and over but under 63.....	105	129	2,044	2,592,787	8,943,347	48.....	2	2			
63 and over.....	9	10	150	169,585	690,098	Over 48 but under 54.....	1	1	460	574,070	2,945,078
COAL, BITUMINOUS, total <sup>1</sup> .....	97	110	12,394	17,579,962	30,643,221	54 and over but under 63.....	43	53	112	116,833	554,220
Under 25.....	3	3	383	524,133	981,663	63 and over.....	6	7			
25 and over but under 36.....	9	9	1,234	1,580,143	2,560,241						
36 and over but under 40.....	2	2									
40.....	2	2	423	811,721	1,321,617						
44 and over but under 48.....	1	1									
48.....	80	93	10,354	14,663,965	25,820,700						

<sup>1</sup> See headnote.

TABLE 7.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 150 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 detailed power-equipment information. Of the 243 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 6]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSE-POWER OF—							
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	5,000 to 9,999
Number of enterprises reporting power equipment <sup>1</sup> .....	237	4	31	62	38	45	48	4	5
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	183,595	57	1,847	9,863	12,552	31,013	75,999	14,268	37,996
Prime movers, total horsepower.....	57,235	57	1,311	4,578	4,868	12,210	24,731	3,830	5,650
Steam engines—									
Number.....	444								
Horsepower.....	52,234	6	27	52	38	126	153	14	28
Steam turbines—									
Number.....	8			4	3			1	
Horsepower.....	1,130			130	250			750	
Internal-combustion engines—									
Number.....	83	2	14	24	14	23	6		
Horsepower.....	3,871	7	323	1,102	831	1,429	179		
Horsepower rating of inactive prime movers, included above.....	1,634			49		130	1,465		
Electric motors driven by purchased energy—									
Number.....	3,844		44	183	265	640	1,590	267	841
Horsepower.....	126,360		536	5,285	7,684	18,803	51,268	10,438	32,346
Electric motors driven by energy generated by enterprises reporting:									
Number.....	327		1	28	22	35	241		
Horsepower.....	10,260		50	570	1,210	848	7,632		
Electric generators:									
Number.....	45		1	7	7	4	21	5	
Kilowatts.....	8,125		35	1,025	750	640	4,625	1,050	

<sup>1</sup> See headnote.

<sup>2</sup> See Table 9 for total horsepower rating of power equipment for all enterprises.

## MINES AND QUARRIES—INDIANA

TABLE 8.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.....	16,742	16,630	16,803	17,210	16,716	16,958	17,083	16,624	16,355	16,854	17,153	16,405	<i>16,114</i>	93.6
Coal, bituminous.....	12,800	14,197	14,168	13,774	12,435	12,293	12,295	12,039	<i>11,628</i>	12,238	12,862	12,924	13,410	81.9
Limestone.....	2,881	<i>1,322</i>	1,999	2,595	3,206	3,490	3,555	3,311	3,453	3,321	3,182	2,610	2,030	51.3
Sand and gravel.....	738	459	482	631	798	892	936	980	949	917	805	614	<i>411</i>	42.8
Stone, miscellaneous.....	129	87	45	65	138	145	164	182	187	189	156	113	125	19.6
Sand, molding.....	36	30	29	33	33	35	34	34	40	42	43	41	37	67.4
Other industries.....	98	85	80	112	106	98	99	98	98	97	105	103	101	71.4

TABLE 9.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises]

	Total	Coal, bituminous	Limestone	Sand and gravel	Stone, miscellaneous	Sand, molding	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	399	222	91	58	15	6	7
Number of mines and quarries.....	452	235	116	71	16	6	8
Persons engaged in industry, total (all classes).....	18,270	13,711	3,324	923	168	55	103
Proprietors and firm members.....	295	199	53	16	23	1	3
Principal salaried officers of corporations <sup>3</sup> .....	173	87	43	37	6	5	1
Other salaried officers and employees <sup>4</sup> .....	1,099	585	347	132	6	13	6
Wage earners (average for the year).....	16,742	12,800	2,881	738	129	36	98
Principal expenses:							
Salaries and wages—							
Principal officers of corporations <sup>5</sup> .....	\$800,517	\$410,330	\$285,034	\$138,703	—	\$21,000	\$2,400
Other salaried officers and employees <sup>6</sup> .....	\$2,206,403	\$1,082,369	\$751,275	\$330,324	\$12,505	\$21,660	\$8,360
Wage earners.....	\$23,375,698	\$18,101,859	\$4,032,335	\$984,331	\$120,777	\$42,050	\$93,746
Contract work.....	\$113,735	\$43,245	\$31,795	\$36,553	—	\$2,142	—
Supplies.....	\$5,144,403	\$3,718,903	\$894,104	\$406,781	\$30,095	\$11,112	\$33,413
Fuel.....	\$800,559	\$510,387	\$192,564	\$130,605	\$7,856	\$6,887	\$12,260
Purchased electric energy.....	\$1,878,634	\$989,641	\$471,263	\$407,809	\$7,950	\$1,724	\$247
Expenditures for development (included above in "Principal expenses").....	\$300,000	\$275,000	\$30,000	—	\$2,000	—	—
Value of products.....	\$48,992,786	\$31,501,936	\$12,247,106	\$4,452,720	\$303,739	\$242,800	\$244,395
Machinery and other equipment purchased during the year, total cost.....	\$1,595,989	\$1,072,936	\$179,730	\$306,656	\$3,000	\$11,194	\$16,823
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	188,735	106,809	47,470	31,470	1,099	620	1,267
Prime movers, total horsepower <sup>4</sup> .....	60,982	38,512	8,927	10,923	802	510	1,248
Steam engines—							
Number.....	534	306	105	82	17	4	10
Horsepower.....	55,981	36,997	6,844	10,082	625	350	1,033
Steam turbines—							
Number.....	8	6	2	—	—	—	—
Horsepower.....	1,130	930	150	—	—	—	—
Internal-combustion engines—							
Number.....	83	23	20	16	4	5	6
Horsepower.....	3,871	535	1,933	341	237	100	165
Electric motors driven by purchased energy—							
Number.....	3,909	2,095	1,303	488	12	8	3
Horsepower.....	127,753	68,297	38,543	20,547	237	110	19
Electric motors driven by energy generated by enterprises reporting:							
Number.....	327	295	30	—	—	2	—
Horsepower.....	10,260	9,308	912	—	—	40	—
Electric generators: <sup>5</sup>							
Number.....	45	33	6	—	—	1	—
Kilowatts.....	8,125	7,105	995	—	—	25	—
Fuel and electric energy consumed:							
Fuel—							
Coal, bituminous..... tons, 2,000 pounds.....	458,842	354,237	60,409	36,499	437	655	6,605
Fuel oils..... gallons.....	102,373	3,600	35,989	60,394	—	323	2,067
Gasoline and kerosene..... gallons.....	310,836	100,830	96,399	62,907	25,305	14,385	11,910
Electric energy—							
Purchased..... kw.-hours.....	103,569,585	56,144,832	23,898,023	23,052,671	357,080	103,079	13,900
Generated by enterprises reporting..... kw.-hours.....	3,625,506	2,035,985	1,395,845	—	—	65,000	* 123,676

<sup>1</sup> Abrasive materials, <sup>2</sup> enterprises; clay, 5.<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>5</sup> Includes 1,634 horsepower for inactive prime movers.<sup>6</sup> Includes 1,225 kilowatts for inactive generators.<sup>\*</sup> Energy produced by a generator operated in a manufacturing plant under the same ownership.

# IOWA

On the basis of the industries canvassed for 1929, Iowa ranked twenty-sixth among the States in value of mineral products and twentieth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 20.7 per cent less in 1929 than in 1919. This decrease is accounted for principally by the decline in the production and value of bituminous coal, for which comparative figures are given in Table 2.

The industries reported for 1929, ranked according to value of products, are shown in Table 3. The coal industry ranked first in the State, accounting for 70 per cent of the total product. This industry, together with the sand and gravel and the limestone industries, produced 96 per cent of the total. Iowa ranked twelfth among the States in 1929 in the coal industry and thirteenth in both of the other industries.

The corporation was the dominant form of organization among enterprises in the mining industries in Iowa in 1929. As shown in Table 4, corporations, while operating only 43.8 per cent of all enterprises, employed 86.6 per cent of the wage earners, and produced 87.4 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 5 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in Iowa, 84.6 per cent were in classes having not more than 50 wage earners. These enterprises employed only 29.1 per cent of the total number of wage earners and contributed 38.9 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 6, show that the 48-hour week predominated, while the "54 and over but under 63" class ranked second. In the bituminous-coal industry 94.9 per cent of the wage earners were in the 48-hour-week class. In the sand and gravel and the limestone industries the longer working week predominated.

Table 7 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 13 enterprises in the "1,000 or more" horsepower group reported 18,647 horsepower, or 35.5 per cent. This amount, together with 18,473 reported by 30 enterprises in the next smaller group, represents 70.8 per cent of the total shown.

The statistics for wage earners presented in Table 8, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 9 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919		1929		1919	
	All industries	Revised (for comparative purposes) <sup>2</sup>			All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>1</sup> .....	240	201	198	1.5				
Number of mines and quarries.....	247	207	226	-8.4				
Persons engaged, total.....	7,812	7,275	12,034	-39.5				
Proprietors and firm members.....	190	171	200	-14.5				
Salaried employees.....	468	338	560	-39.6				
Wage earners (average for the year) <sup>3</sup> .....	7,104	6,706	11,274	-40.0				
Power equipment (total horsepower).....	54,902	38,945	32,166	21.1				
Principal expenses: <sup>4</sup>								
Salaries.....	\$1,113,170	\$798,740	\$1,343,097	-40.6				
Wages.....	9,317,308	8,805,963	12,466,426	-29.4				
Contract work.....	7,641	5,103	33,464	-84.8				
Supplies and materials.....	1,699,507	1,432,905	2,072,308	-30.9				
Fuel.....	314,449	214,330	606,285	-64.6				
Purchased electric energy.....	542,404	334,392	142,559	134.6				
Value of products <sup>5</sup> .....	16,910,280	14,648,383	18,473,558	-20.7				

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

MINES AND QUARRIES—IOWA

TABLE 2.—SUMMARY FOR BITUMINOUS-COAL INDUSTRY: 1929 AND 1919

	1929	1919	Per cent of increase or decrease (-)		1929	1919	Per cent of increase or decrease (-)
Number of enterprises <sup>1</sup> .....	167	167	-----	Value of products, total.....	\$11,832,816	\$16,908,368	-30.0
Number of mines.....	172	195	-11.8	Coal:			
Wage earners (average for the year) <sup>2</sup> .....	5,942	10,584	-43.9	Quantity (tons, 2,000 pounds).....	4,285,000	5,474,000	-21.7
Power equipment (total horsepower).....	25,763	26,118	-1.4	Value at mine.....	\$11,829,000	\$16,893,000	-30.0
Principal expenses: <sup>3</sup>				Other products.....	\$4,000	\$10,000	-60.0
Salaries.....	\$640,178	\$1,202,866	-46.8				
Wages.....	\$7,820,575	\$11,087,918	-33.1				
Contract work.....	\$2,170	\$33,464	-93.5				
Supplies and materials.....	\$989,425	\$1,758,025	-43.7				
Fuel.....	\$121,069	\$449,697	-73.1				
Purchased electric energy.....	\$227,112	\$120,660	88.2				

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—PRINCIPAL INDUSTRIES RANKED IN ORDER OF VALUE OF PRODUCTS: 1929

INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products	INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products
All industries, total.....	240	247	7,164	\$16,910,280	Sand and gravel.....	38	39	394	\$2,240,638
Coal, bituminous.....	167	172	5,942	11,832,816	Limestone.....	25	26	632	2,165,957
					Other industries <sup>3</sup> .....	10	10	196	670,869

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>3</sup> Gypsum, 8 enterprises; sand, molding, 1; stone, miscellaneous, 1.

TABLE 4.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	240	247	7,164	\$16,910,280	SAND AND GRAVEL, total.....	38	39	394	\$2,240,638
Corporations.....	105	112	6,207	14,736,351	Corporations.....	26	27	330	1,934,842
Other <sup>1</sup> .....	135	135	957	2,124,929	Other <sup>1</sup> .....	12	12	64	305,796
COAL, BITUMINOUS, total.....	167	172	5,942	11,832,816	LIMESTONE, total.....	25	26	632	2,165,957
Corporations.....	53	58	5,092	10,141,299	Corporations.....	17	18	593	2,048,341
Other <sup>1</sup> .....	114	114	850	1,691,517	Other <sup>1</sup> .....	8	8	39	117,616

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

TABLE 5.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	240	247	7,164	\$9,317,398	\$16,910,280	LIMESTONE, total.....	25	26	632	\$744,618	\$2,165,957
1 to 5.....	106	106	345	415,311	1,021,373	1 to 5.....	6	6	14	14,465	28,730
6 to 20.....	68	69	764	952,754	2,756,764	6 to 20.....	11	11	160	195,170	814,345
21 to 50.....	29	29	973	1,149,824	2,792,104	21 to 50.....	5	5	188	243,283	606,044
51 to 100.....	20	21	1,346	1,636,173	2,821,185	51 to 100.....	2	2	270	291,691	716,838
101 to 250.....	12	15	1,850	2,453,119	3,452,267	101 to 250.....	1	2			
251 to 500.....	4	5	1,886	2,710,212	4,066,607	SAND AND GRAVEL, total.....	38	39	394	506,690	2,240,638
501 to 1,000.....	1	2				1 to 5.....	14	14	55	80,199	399,157
COAL, BITUMINOUS, total.....	167	172	5,942	7,820,575	11,832,816	6 to 20.....	21	22	339	426,491	1,841,481
1 to 5.....	84	84	267	309,902	862,227	21 to 50.....	3	3			
6 to 20.....	32	32	338	411,988	684,919						
21 to 50.....	18	18	576	657,705	1,203,356						
51 to 100.....	17	18	1,156	1,409,649	2,125,171						
101 to 250.....	11	13	1,719	2,321,119	3,290,536						
251 to 500.....	4	5	1,886	2,710,212	4,066,607						
501 to 1,000.....	1	2									

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

MINES AND QUARRIES—IOWA

TABLE 6.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Iowa was 112, distributed as follows: Coal, bituminous 108; limestone, 3; stone, miscellaneous, 1. The combined value of products represented by these enterprises was \$925,287]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	128	135	6,665	\$8,747,648	\$15,984,983	LIMESTONE, total <sup>1</sup> .....	22	23	625	\$736,983	\$2,149,276
25 and over but under 36.....	3	3	147	187,828	286,280	Over 48 but under 54.....	2	2	183	205,005	386,310
40.....	3	3	190	238,312	406,293	63 and over.....	2	3	442	531,978	1,762,966
44 and over but under 48.....	2	2	265	7,004,592	10,629,245	54 and over but under 63.....	18	18	394	506,690	2,240,638
48.....	58	63	45	62,770	222,210	SAND AND GRAVEL, total.....	38	39	327	425,224	1,811,903
Over 48 but under 54.....	3	3	799	1,008,789	3,762,726	Over 48 but under 54.....	1	1	67	81,466	428,785
54 and over but under 63.....	53	54	219	245,357	678,233	54 and over but under 63.....	33	34			
63 and over.....	6	7				63 and over.....	4	4			
COAL, BITUMINOUS, total <sup>1</sup> .....	59	64	5,455	7,204,460	10,934,210						
25 and over but under 36.....	2	2									
40.....	2	2	277	351,202	530,603						
44 and over but under 48.....	2	2									
48.....	53	58	5,178	6,913,258	10,403,607						

<sup>1</sup> See headnote.

TABLE 7.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 112 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 detailed power-equipment information. Of the 128 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 3]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	126	2	24	31	25	30	13
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	52,457	24	1,610	5,298	8,405	18,473	18,647
Prime movers, total horsepower.....	15,783		700	1,463	2,035	4,731	6,854
Steam engines—							
Number.....	309		12	20	17	227	33
Horsepower.....	13,127		395	1,012	1,730	3,385	6,605
Internal-combustion engines—							
Number.....	63		11	15	4	25	8
Horsepower.....	2,650		305	451	305	1,340	249
Horsepower rating of inactive prime movers, included above.....	345					75	270
Electric motors driven by purchased energy—							
Number.....	1,112	16	51	153	196	448	248
Horsepower.....	36,674	24	910	3,835	6,370	13,742	11,793
Electric motors driven by energy generated by enterprises reporting:							
Number.....	42		3			7	32
Horsepower.....	1,658		20			310	1,323
Electric generators:							
Number.....	10		1	1		1	7
Kilowatts.....	1,190		40	200		200	750

<sup>1</sup> See headnote.

<sup>2</sup> See Table 9 for total horsepower rating of power equipment for all enterprises.

TABLE 8.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 MONTH OR NEAREST REPRESENTATIVE DAY												Percent minimum is of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
All industries, total.....	7,164	<b>7,494</b>	<b>7,591</b>	7,507	6,735	<i>6,136</i>	6,164	6,420	6,522	7,511	7,972	7,971	7,949	77.0
Coal, bituminous.....	5,942	6,713	6,844	6,611	5,462	4,756	<i>4,640</i>	4,861	4,949	6,013	6,551	6,310	7,088	65.5
Limestone.....	632	422	<i>399</i>	473	657	709	776	779	788	759	710	599	508	50.1
Sand and gravel.....	394	<i>163</i>	166	240	403	466	530	557	564	544	516	385	196	27.1
Other industries.....	196	206	182	177	213	205	218	223	213	195	195	177	166	70.0

## MINES AND QUARRIES—IOWA

TABLE 9.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises]

	Total	Coal, bitumi- nous	Sand and gravel	Limestone <sup>1</sup>	Other indus- tries <sup>2</sup>
Number of enterprises <sup>3</sup> .....	240	167	38	25	10
Number of mines and quarries.....	247	172	39	26	10
Persons engaged in industry, total (all classes).....	7,812	6,308	532	702	210
Proprietors and firm members.....	190	160	10	10	1
Principal salaried officers of corporations <sup>4</sup> .....	115	65	38	12	1
Other salaried officers and employees <sup>4</sup> .....	343	201	81	48	13
Wage earners (average for the year).....	7,164	5,942	304	632	196
Principal expenses:					
Salaries and wages—					
Principal officers of corporations <sup>4</sup> .....	\$366,590	\$209,952	\$151,213	\$35,425	.....
Other salaried officers and employees <sup>4</sup> .....	\$716,580	\$430,226	\$180,817	\$92,645	\$32,892
Wage earners.....	\$9,317,398	\$7,820,575	\$506,600	\$744,618	\$245,515
Contract work.....	\$7,641	\$2,170	\$2,538	\$2,933	.....
Supplies.....	\$1,000,607	\$839,425	\$263,876	\$359,203	\$87,003
Fuel.....	\$314,440	\$121,000	\$98,483	\$88,811	\$6,086
Purchased electric energy.....	\$542,404	\$227,112	\$208,012	\$80,131	\$27,149
Expenditures for development (included above in "Principal expenses").....	\$336,000	\$305,000	.....	\$31,000	.....
Value of products.....	\$16,910,280	\$11,832,816	\$2,240,638	\$2,165,957	\$670,869
Machinery and other equipment purchased during the year, total cost.....	\$423,601	\$146,011	\$202,736	\$56,362	\$18,582
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	54,802	25,763	15,907	10,699	2,533
Prime movers, total horsepower <sup>5</sup> .....	17,675	7,120	4,560	5,913	82
Steam engines—					
Number.....	388	320	29	34	5
Horsepower.....	15,019	7,020	2,590	5,337	72
Internal-combustion engines—					
Number.....	63	6	33	23	1
Horsepower.....	2,656	100	1,970	576	10
Electric motors driven by purchased energy—					
Number.....	1,152	543	359	154	96
Horsepower.....	37,227	18,643	11,347	4,786	2,451
Electric motors driven by energy generated by enterprises reporting:					
Number.....	42	37	.....	5	.....
Horsepower.....	1,658	1,436	.....	222	.....
Electric generators: <sup>6</sup>					
Number.....	10	6	1	3	.....
Kilowatts.....	1,190	1,000	40	150	.....
Fuel and electric energy consumed:					
Fuel—					
Coal—					
Anthracite..... tons, 2,240 pounds.....	985	.....	380	.....	605
Bituminous..... tons, 2,000 pounds.....	92,186	56,762	14,236	20,592	590
Coke..... tons, 2,000 pounds.....	30	25	5	.....	.....
Fuel oils..... gallons.....	42,561	21,100	21,361	100	.....
Gasoline and kerosene..... gallons.....	282,482	2,400	171,715	106,663	1,704
Electric energy—					
Purchased..... kw.-hours.....	30,043,893	12,902,539	11,915,091	4,847,233	1,270,030
Generated by enterprises reporting..... kw.-hours.....	266,670	.....	30,000	236,670	.....

<sup>1</sup> Data for several limestone enterprises not included. See "Stone" report, Table 4, p. 332.<sup>2</sup> Gypsum, 8 enterprises; sand, molding, 1; stone, miscellaneous, 1.<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>5</sup> Includes 345 horsepower for inactive prime movers.<sup>6</sup> Includes 100 kilowatts for inactive generators.

# KANSAS

On the basis of the industries canvassed for 1929, Kansas ranked twenty-third among the States in value of mineral products and nineteenth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 5.2 per cent less in 1929 than in 1919.

While the quantity and value of products of the bituminous-coal industry declined materially during the period, the value of output of the lead and zinc mining industries more than doubled, as shown in Table 2. The figures for the limestone industry indicate a considerable growth (\$2,108,325 in 1929; \$835,147 in 1919), which is largely accounted for by the inclusion of data for limestone produced and consumed by cement plants in 1929 and the omission of similar data for 1919.

The corporate form of organization was most important among enterprises in the mining industries in Kansas in 1929. As shown in Table 3, corporations operated 44.8 per cent of all enterprises, employed 76 per cent of the wage earners, and produced 80.5 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in Kansas, 85.1 per cent were in classes having not more than 50 wage earners. These enterprises employed only 34.1 per cent of the total number of wage earners and contributed 39 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 5, show that the 48-hour week predominated, while the "54 and over

but under 63" class ranked second. In the bituminous-coal industry 48.3 per cent of the wage earners were in the 48-hour class, and in the zinc-mining industry 80.6 per cent of the wage earners were in classes of 48 hours and less. In several of the other industries the longer working week predominated.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 21 enterprises in the "1000 or more" horsepower group reported 35,269 horsepower, or 47.7 per cent. This group, together with the 250-499 and 500-999 horsepower groups, accounted for 89.8 per cent of the aggregate.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The zinc-mining industry ranked first in the State, accounting for 44.1 per cent of the total value of products. This industry, together with the bituminous-coal industry, produced 75.1 per cent of the total. Kansas ranked second among the States in 1929 in the zinc-mining industry, accounting for 22.1 per cent of the total value of products for this industry in the United States.

The value of products of the metal-mining industries is the value of the ores or concentrates—in other words, the mine and mill products. The smelting and refining operations and the value of the metals—the final products—are reported by the census of manufactures.

The classification of metal mines, by industries, was determined by the metal of chief value. Therefore, the value of products of the lead-mining industry, for example, represents the value of products for those enterprises classified in that industry, and does not include the mine value of lead contained in the ore or concentrates produced by other metal-mining industries.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919 <sup>2</sup>			1929		1919 <sup>2</sup>	
	All industries	Revised (for comparative purposes) <sup>3</sup>				All industries	Revised (for comparative purposes) <sup>3</sup>		
Number of enterprises <sup>4</sup> .....	261	234	201	16.4					
Number of mines and quarries.....	292	257	238	8.0					
Persons engaged, total.....	7,938	7,604	10,558	-28.0					
Proprietors and firm members.....	249	234	168	39.3					
Salaried employees.....	4,392	4,509	559	-44.7					
Wage earners (average for the year) <sup>5</sup> .....	7,297	7,061	9,831	-28.2					
Power equipment (total horsepower).....	76,888	67,665	88,101	77.6					
Principal expenses: <sup>6</sup>									
Salaries.....	\$1,027,305	\$810,324	\$1,101,145	-26.4					
Wages.....	8,465,301	8,104,133	12,333,424	-34.8					
Contract work.....	214,240	213,890	109,822	94.8					
Supplies and materials.....	3,553,420	3,101,066	3,061,785	1.3					
Fuel.....	380,508	335,647	797,937	-57.9					
Purchased electric energy.....	1,072,993	923,676	176,504	423.3					
Value of products <sup>7</sup> .....	22,463,509	20,688,495	21,823,046	-5.2					

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

## MINES AND QUARRIES—KANSAS

TABLE 2.—SUMMARY FOR LEAD AND ZINC MINING AND FOR BITUMINOUS-COAL INDUSTRIES: 1929 AND 1919

	LEAD AND ZINC		COAL, BITUMINOUS		PER CENT OF INCREASE OR DECREASE (—)	
	1929	1919	1929	1919	Lead and zinc	Coal, bituminous
Number of enterprises <sup>1</sup> .....	37	30	150	129	(2)	16.3
Number of mines.....	52	30	155	166	(2)	-6.6
Wage earners (average for the year) <sup>2</sup> .....	2,710	1,141	3,405	8,084	137.5	-57.9
Power equipment (total horsepower).....	37,399	11,496	18,548	23,434	225.3	-20.3
Principal expenses: <sup>4</sup>						
Salaries.....	\$442,046	\$180,909	\$226,711	\$824,528	144.3	-72.5
Wages.....	\$3,490,048	\$1,760,200	\$3,617,171	\$9,949,156	98.3	-63.6
Contract work.....	\$138,282	\$68,092	\$7,097	\$6,353	103.1	11.7
Supplies and materials.....	\$1,945,695	\$987,840	\$710,406	\$1,906,063	97.0	-62.7
Fuel.....	\$135,323	\$261,020	\$121,730	\$479,320	-48.2	-74.6
Purchased electric energy.....	\$707,910	\$107,797	\$135,437	\$55,520	556.7	144.0
Value of products <sup>5</sup> .....	\$11,035,153	\$4,372,968	\$6,952,829	\$15,748,535	126.5	-55.9
Quantity (tons, 2,000 pounds).....			2,986,190	5,204,383		-42.6

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> Per cent not computed where base is less than 100.<sup>3</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>4</sup> See GENERAL EXPLANATIONS—Expenses.<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>6</sup> See GENERAL EXPLANATIONS—Value of Products.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	261	292	7,297	\$22,463,509	LIMESTONE, total.....	31	33	700	\$2,108,325
Corporations.....	117	141	5,544	18,085,050	Corporations.....	15	16	429	1,467,550
Other <sup>1</sup> .....	144	151	1,753	4,378,459	Other <sup>1</sup> .....	16	17	271	640,775
ZINC, total.....	30	45	2,428	9,912,331	SAND AND GRAVEL, total.....	27	35	236	1,775,014
Corporations <sup>2</sup> .....	30	45	2,428	9,912,331	Corporations.....	17	25	174	1,377,251
COAL, BITUMINOUS, total.....	150	155	3,405	6,952,829	Other <sup>1</sup> .....	10	10	62	397,763
Corporations.....	46	49	2,363	5,202,341	LEAD, total.....	7	7	282	1,122,822
Other <sup>1</sup> .....	104	106	1,042	1,750,488	Corporations.....	4	4	222	1,027,205
					Other <sup>1</sup> .....	3	3	60	95,557

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.<sup>2</sup> Includes 2 other forms of organization.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	261	292	7,297	\$3,465,391	\$22,463,509	LIMESTONE, total.....	31	33	700	\$747,099	\$2,108,325
1 to 5.....	91	91	291	297,397	787,512	1 to 5.....	6	6	10	9,375	30,311
6 to 20.....	94	99	1,077	1,338,376	3,421,850	6 to 20.....	13	14	171	223,643	490,276
21 to 50.....	37	43	1,123	1,399,036	4,555,762	21 to 50.....	9	9	273	303,739	1,212,468
51 to 100.....	28	33	2,030	2,312,430	6,451,273	51 to 100.....	3	4	246	210,342	369,280
101 to 250.....	8	18	1,319	1,615,309	4,204,474	LEAD, total.....	7	7	282	349,812	1,122,822
251 to 500.....	2	5	1,457	1,502,843	3,042,638	6 to 20.....	2	2			
501 to 1,000.....	1	3				21 to 50.....	3	3	282	349,812	1,122,822
						51 to 100.....	2	2			
COAL, BITUMINOUS, total.....	150	155	3,405	3,617,171	6,952,829	SAND AND GRAVEL, total.....	27	35	236	361,258	1,775,014
1 to 5.....	70	70	232	223,829	417,072	1 to 5.....	11	11	36	40,833	299,553
6 to 20.....	53	53	625	725,525	1,427,502	6 to 20.....	13	16	116	187,609	838,337
21 to 50.....	15	16	490	646,270	1,853,198	21 to 50.....	3	8	84	123,755	587,069
51 to 100.....	8	10	549	512,461	793,748						
101 to 250.....	2	2									
251 to 500.....	1	1	1,509	1,509,000	2,451,311						
501 to 1,000.....	1	3									
ZINC, total.....	30	45	2,428	3,140,236	9,912,331						
6 to 20.....	4	4	60	95,252	297,546						
21 to 50.....	5	5	150	191,330	570,733						
51 to 100.....	15	17	1,055	1,356,074	4,397,849						
101 to 250.....	5	15									
251 to 500.....	1	4	1,163	1,497,580	4,637,203						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

MINES AND QUARRIES—KANSAS

TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Kansas was 113, distributed as follows: Coal, bituminous, 103; lead, 1; limestone, 5; stone, miscellaneous, 4. The combined value of products represented by these enterprises was \$1,035,354]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup>	148	179	6,623	\$7,790,172	\$21,428,155	LIMESTONE, total <sup>1</sup>	26	28	652	\$692,895	\$2,032,800
Under 25	3	3	86	70,292	190,197	25 and over but under 36	1	1	97	117,126	243,278
25 and over but under 36	6	8	1,031	1,043,462	1,794,127	36 and over but under 48	8	9	555	575,769	1,780,522
36 and over but under 40	3	4	92	136,581	418,335	40 and over but under 44	1	1	456	585,587	1,627,236
40 and over but under 44	1	1	1	1	1	44 and over but under 48	2	2	3,530	4,263,181	11,437,989
44 and over but under 48	2	2	1	1	1	48 and over but under 54	1	1	1,342	1,576,752	5,543,430
48 and over but under 54	76	94	86	123,317	416,791	54 and over but under 63	60	56	6	6	6
54 and over but under 63	1	1	1	1	1	63 and over	6	6	270	336,551	1,112,486
63 and over	6	6	1,342	1,576,752	5,543,430	LEAD, total <sup>1</sup>	6	6	270	336,551	1,112,486
COAL, BITUMINOUS, total <sup>1</sup>	47	52	2,812	3,043,308	6,045,961	48 and over but under 63	4	4	270	336,551	1,112,486
Under 25	3	3	86	70,292	190,197	63 and over	1	1	270	336,551	1,112,486
25 and over but under 36	5	7	1,029	1,040,962	1,789,627	SAND AND GRAVEL, total	27	35	236	361,258	1,775,014
36 and over but under 40	3	4	308	373,162	788,932	48 and over but under 54	10	16	111	195,814	744,583
40 and over but under 44	1	1	1	1	1	54 and over but under 63	1	1	104	131,133	612,486
44 and over but under 48	1	2	1,859	1,523,680	3,160,802	63 and over	3	3	21	34,311	117,945
48 and over but under 54	30	31	30	35,312	116,403	ZINC, total	30	45	2,428	3,140,236	9,912,331
54 and over but under 63	4	4	1,956	2,474,666	7,463,038	44 and over but under 48	1	4	472	605,870	2,449,293
48 and over but under 54	20	30	472	605,870	2,449,293	48 and over but under 63	2	7	7	7	7
54 and over but under 63	7	9	7	7	7	63 and over	2	2	2	2	2
63 and over	2	2	2	2	2						

<sup>1</sup> See headnote.

TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 113 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 detailed power-equipment information. Of the 148 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 6]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 or more
Number of enterprises reporting power equipment <sup>1</sup>	142	5	19	37	30	30	21
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup>	73,888	79	1,144	6,340	10,274	20,782	35,260
Prime movers, total horsepower	28,461	34	285	1,651	5,061	10,086	11,344
Steam engines—							
Number	165		6	13	41	46	50
Horsepower	15,469		225	430	2,764	5,852	6,198
Steam turbines—							
Number	3					3	
Horsepower	30					30	
Internal-combustion engines—							
Number	155	2	4	23	22	44	60
Horsepower	12,962	34	60	1,221	2,267	4,204	5,140
Horsepower rating of inactive prime movers, included above	350				85		265
Electric motors driven by purchased energy—							
Number	1,222	3	45	125	175	296	578
Horsepower	45,427	45	859	4,689	5,213	10,696	23,925
Electric motors driven by energy generated by enterprises reporting:							
Number	34			12	4	16	2
Horsepower	1,146			163	75	878	30
Electric generators:							
Number	7			2	2	2	1
Kilowatts	505			193	87	200	20

<sup>2</sup> See headnote.

<sup>1</sup> See Table 8 for total horsepower rating of power equipment for all enterprises.

## MINES AND QUARRIES—KANSAS

TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.....	7,297	7,012	7,784	8,048	6,692	6,491	6,701	6,779	7,505	7,012	7,862	7,712	6,764	80.7
Coal, bituminous.....	3,405	4,169	4,186	4,000	2,624	2,880	2,450	2,084	3,203	3,555	3,846	3,887	3,009	56.0
Zinc.....	2,423	2,198	2,303	2,590	2,559	2,500	2,680	2,406	2,657	2,548	2,635	2,420	1,638	61.1
Limestone.....	700	510	557	665	758	808	770	796	728	728	724	695	613	63.1
Lead.....	282	356	357	352	358	278	260	303	292	275	217	213	182	34.0
Sand and gravel.....	230	157	155	212	248	209	275	280	280	286	261	234	103	47.2
Stone, miscellaneous.....	42	33	33	21	21	31	31	36	61	64	64	62	42	32.8
Other industries.....	204	209	193	206	223	226	211	200	206	173	215	192	187	78.8

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Two of the "Other industries," however, were of greater importance in the State than one of the industries shown separately]

	Total	Zinc <sup>1</sup>	Coal, bituminous	Limestone	Sand and gravel	Lead <sup>1</sup>	Stone, miscellaneous	Other industries <sup>2</sup>
Number of enterprises <sup>3</sup> .....	261	30	150	31	27	7	6	10
Number of mines and quarries.....	292	45	165	33	35	7	6	11
Persons engaged in industry, total (all classes).....	7,938	2,503	3,716	750	334	297	50	222
Proprietors and firm members.....	240	-----	205	18	15	2	7	2
Principal salaried officers of corporations <sup>4</sup> .....	76	25	27	3	16	2	-----	2
Other salaried officers and employees <sup>4</sup> .....	317	110	79	35	67	11	1	14
Wage earners (average for the year).....	7,297	2,423	3,405	700	230	282	42	204
Principal expenses:								
Salaries and wages—								
Principal officers of corporations <sup>4</sup> .....	\$235,681	\$95,310	\$65,350	\$18,600	\$71,827	\$7,000	-----	\$7,504
Other salaried officers and employees <sup>4</sup> .....	\$781,084	\$316,059	\$161,361	\$78,421	\$145,214	\$23,677	\$450	\$36,602
Wage earners.....	\$3,465,391	\$8,140,236	\$3,617,171	\$747,099	\$361,258	\$349,812	\$42,504	\$207,611
Contract work.....	\$214,240	\$119,930	\$7,097	\$49,947	\$550	\$18,346	-----	\$18,664
Supplies.....	\$3,533,429	\$1,685,937	\$710,406	\$371,028	\$452,369	\$259,728	\$5,070	\$68,867
Fuel.....	\$380,508	\$107,064	\$121,730	\$59,741	\$24,861	\$27,659	\$1,545	\$17,308
Purchased electric energy.....	\$1,072,993	\$607,274	\$135,487	\$68,897	\$149,317	\$40,030	-----	\$11,382
Expenditures for development (included above in "Principal expenses").....	\$612,000	\$268,000	\$266,000	\$55,000	-----	\$20,000	-----	\$4,000
Value of products.....	\$22,463,509	\$9,012,331	\$6,952,829	\$2,108,325	\$1,775,014	\$1,122,822	\$80,047	\$512,141
Machinery and other equipment purchased during the year, total cost.....	\$980,380	\$337,470	\$263,794	\$209,143	\$108,110	\$1,923	\$1,000	\$68,040
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	70,888	33,840	18,548	9,282	9,223	3,559	701	1,735
Prime movers, total horsepower <sup>5</sup> .....	29,561	8,414	11,237	4,274	1,545	2,010	576	1,505
Steam engines—								
Number.....	224	6	159	49	7	-----	2	1
Horsepower.....	10,569	600	11,105	3,194	470	-----	100	1,100
Steam turbines—								
Number.....	3	-----	3	-----	-----	-----	-----	-----
Horsepower.....	30	-----	30	-----	-----	-----	-----	-----
Internal-combustion engines—								
Number.....	155	82	4	28	13	16	4	8
Horsepower.....	12,962	7,814	102	1,080	1,075	2,010	476	405
Electric motors driven by purchased energy—								
Number.....	1,323	648	377	108	123	50	2	15
Horsepower.....	47,327	25,426	7,311	5,008	7,678	1,540	125	230
Electric motors driven by energy generated by enterprises reporting:								
Number.....	34	-----	20	2	-----	-----	-----	12
Horsepower.....	1,146	-----	953	30	-----	-----	-----	163
Electric generators:								
Number.....	7	-----	4	1	-----	-----	-----	2
Kilowatts.....	505	-----	287	20	-----	-----	-----	108
Fuel and electric energy consumed:								
Fuel—								
Coal—								
Anthracite..... tons, 2,240 pounds.....	342	342	-----	-----	-----	-----	-----	-----
Bituminous..... tons, 2,000 pounds.....	71,889	1,553	56,611	10,587	2,366	95	-----	737
Fuel oils..... gallons.....	372,832	48,007	820	103,350	40,255	-----	-----	179,500
Gasoline and kerosene..... gallons.....	352,943	37,015	9,200	145,393	110,673	-----	-----	33,766
Gas, natural..... M cubic feet.....	301,572	233,700	-----	-----	-----	-----	-----	-----
Electric energy—								
Purchased..... kw.-hours.....	65,320,992	47,304,970	5,143,373	4,048,452	5,950,224	2,504,116	-----	276,867
Generated by enterprises reporting..... kw.-hours.....	648,958	-----	162,200	50,750	-----	-----	-----	336,008

<sup>1</sup> Includes operations on dumps and old tailings: Zinc, 3; lead, 1.<sup>2</sup> Abrasive materials, 3 enterprises; clay, 2; gypsum, 2; sandstone, 2; silica, 1.<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>5</sup> Includes 350 horsepower for inactive prime movers.

## KENTUCKY

On the basis of the industries canvassed for 1929, Kentucky ranked sixth among the States in value of mineral products and third in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 36.4 per cent greater in 1929 than in 1919.

Although increases occurred in all industries for which figures can be shown for both censuses, most of the increase is accounted for by the bituminous-coal industry, for which comparative figures are given in Table 2.

The corporation was the dominant form of organization among enterprises in the mining industries in Kentucky in 1929. As shown in Table 3, corporations operated 74.8 per cent of all enterprises, employed 96.5 per cent of the wage earners, and produced 96.4 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in

Kentucky, 71.1 per cent were in classes having not more than 100 wage earners. These enterprises employed only 21 per cent of the total number of wage earners and contributed 18.4 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 5, show that the 48-hour week predominated, while the "25 and over but under 36" class ranked second in the number of wage earners employed. In the bituminous-coal industry 52.6 per cent were employed 48 hours per week.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 64 enterprises in the 1,000–2,499 horsepower group reported 94,988 horsepower, or 30.3 per cent, while all enterprises reporting 500 or more accounted for 265,654 horsepower, or 84.7 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The bituminous-coal industry ranked first in the State, accounting for 92.1 per cent of the total value of products, while Kentucky ranked fourth among the States in 1929 in the bituminous-coal industry.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919 <sup>2</sup>			1929		1919 <sup>2</sup>	
	All industries	Revised (for comparative purposes) <sup>3</sup>				All industries	Revised (for comparative purposes) <sup>3</sup>		
Number of enterprises <sup>4</sup> .....	551	540	742	-27.2	Principal expenses: <sup>6</sup> Salaries..... Wages..... Contract work..... Supplies and materials..... Fuel..... Purchased electric energy..... Value of products <sup>7</sup> .....	\$6,589,105	\$6,448,619	\$6,484,276	-0.5
Number of mines and quarries.....	629	617	864	-28.6		62,788,640	62,441,677	46,905,076	33.1
Persons engaged, total.....	61,241	60,935	45,259	34.6		71,736	63,905	352,945	-31.9
Proprietors and firm members.....	210	209	327	-36.1		12,094,202	11,960,977	11,611,317	2.9
Salaried employees.....	3,213	3,157	3,488	-9.5		909,957	813,180	1,704,410	-52.3
Wage earners (average for the year) <sup>5</sup> .....	57,818	57,569	41,444	38.9		3,095,216	3,082,436	584,928	427.0
Power equipment (total horsepower).....	317,973	310,664	135,095	130.0		103,849,625	102,602,027	75,157,389	36.4

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products

## MINES AND QUARRIES—KENTUCKY

TABLE 2.—SUMMARY FOR BITUMINOUS-COAL INDUSTRY: 1929 AND 1919

	1929	1919	Per cent of increase or decrease (-)		1929	1919	Per cent of increase or decrease (-)
Number of enterprises <sup>1</sup> .....	434	635	-31.7	Principal expenses—Continued.			
Number of mines.....	500	742	-32.6	Fuel.....	\$564,584	\$1,553,058	-63.6
Wage earners (average for the year) <sup>2</sup> .....	54,904	39,769	38.1	Purchased electric energy.....	\$2,977,508	\$568,435	423.8
Power equipment (total horsepower).....	290,935	126,804	129.6	Value of products, total.....	\$95,647,618	\$72,432,840	32.0
Principal expenses: <sup>3</sup>				Coal:			
Salaries.....	\$5,785,417	\$6,172,657	-6.3	Quantity (tons, 2,000 pounds).....	60,894,000	29,426,000	106.9
Wages.....	\$60,155,095	\$45,615,853	31.9	Value at mine.....	\$95,416,000	\$72,348,000	31.9
Contract work.....	\$41,408	\$199,012	-78.2	Other products.....	\$281,000	\$85,000	171.8
Supplies and materials.....	\$10,923,814	\$10,044,040	-0.2				

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>3</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	551	629	67,818	\$103,849,625	SAND AND GRAVEL, total.....	11	12	249	\$1,347,598
Corporations.....	412	487	55,770	100,134,896	Corporations <sup>2</sup> .....	11	12	249	1,347,598
Other <sup>1</sup> .....	139	142	2,048	3,714,729	FLUORSPAR, total.....	16	23	520	1,328,733
COAL, BITUMINOUS, total.....	434	500	54,904	95,647,618	Corporations.....	9	16	443	1,127,279
Corporations.....	344	408	53,351	93,384,875	Other <sup>1</sup> .....	7	7	86	201,454
Other <sup>1</sup> .....	90	92	1,553	2,262,743	CLAY, total.....	9	11	210	691,682
LIMESTONE, total.....	57	58	1,147	2,336,085	Corporations <sup>2</sup> .....	9	11	210	691,682
Corporations.....	33	34	895	1,822,401					
Other <sup>1</sup> .....	24	24	249	513,594					
ASPHALT AND BITUMINOUS ROCK, total.....	5	6	688	2,293,577					
Corporations.....	5	6	688	2,293,577					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

<sup>2</sup> Includes 1 other form of organization.

<sup>3</sup> Includes 2 other forms of organization.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	551	629	67,818	\$62,788,640	\$103,849,625	COAL, BITUMINOUS—Continued.					
Not reported.....	1	1	254	231,809	502,595	21 to 50.....	67	71	2,424	\$1,924,370	\$2,897,569
1 to 5.....	84	85	1,378	1,253,760	2,451,520	51 to 100.....	92	90	6,844	6,118,862	9,659,878
6 to 20.....	118	119	3,136	2,013,285	5,073,475	101 to 250.....	90	99	14,941	15,241,159	24,786,141
21 to 50.....	89	95	7,389	6,515,626	11,081,493	251 to 500.....	48	64	16,415	20,325,310	32,658,725
51 to 100.....	100	107	15,593	15,857,953	26,547,371	501 to 1,000.....	10	23	6,249	6,986,460	10,829,995
101 to 250.....	95	112	10,743	20,667,107	33,961,152	1,001 to 2,500.....	5	22	7,076	8,662,660	13,405,084
251 to 500.....	49	65	8,249	6,936,460	10,826,065	LIMESTONE, total.....	57	58	1,147	883,724	2,336,085
501 to 1,000.....	10	23	7,076	8,662,660	13,405,084	1 to 5.....	12	12	42	35,753	102,742
1,001 to 2,500.....	5	22				6 to 20.....	27	28	349	270,194	667,364
COAL, BITUMINOUS, total.....	434	500	54,904	60,155,095	95,647,618	21 to 50.....	13	13	429	367,684	982,910
1 to 5.....	53	53	161	147,681	254,900	51 to 100.....	5	5	327	210,093	583,069
6 to 20.....	99	99	794	748,584	1,158,206						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

MINES AND QUARRIES—KENTUCKY

127

TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Kentucky was 129, distributed as follows: Coal, bituminous, 108; limestone, 10; stone, miscellaneous, 11. The combined value of products represented by these enterprises was \$1,133,054]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	422	500	56,951	\$62,003,330	\$102,716,571	LIMESTONE—Continued					
Not reported.....	1	1				Over 48 but under 54.....	5	6	78	\$72,150	\$176,013
Under 25.....	16	20	1,521	1,008,408	1,515,013	54 and over but under 63.....	39	39	985	752,021	2,017,855
25 and over but under 36.....	46	72	10,138	9,422,571	13,832,227	ASPHALT AND BITUMINOUS ROCK, total.....	5	6	688	689,628	2,203,577
36 and over but under 40.....	7	7	844	992,539	1,449,468	54 and over but under 63.....	5	6	688	689,628	2,203,577
40.....	54	63	6,863	7,929,839	12,022,828	FLUORSPAR, total.....	16	23	529	487,580	1,328,733
Over 40 but under 44.....	1	1				44 and over but under 48.....	1	1			
44 and over but under 48.....	15	16	1,712	1,742,189	2,717,352	48.....	10	17	464	420,520	1,148,367
48.....	190	217	28,917	32,743,586	53,463,782	54 and over but under 63.....	5	5	65	67,054	180,366
Over 48 but under 54.....	9	11	255	194,519	351,652	SAND AND GRAVEL, total.....	11	12	240	346,963	1,347,508
54 and over but under 63.....	82	91	6,701	7,990,679	10,463,649	44 and over but under 48.....	1	1			
63 and over.....	1	1				48.....	1	1			
COAL, BITUMINOUS, total <sup>1</sup> .....	326	392	54,134	59,451,332	94,660,146	54 and over but under 63.....	8	9	249	346,963	1,347,508
Under 25.....	14	18	1,512	1,004,414	1,490,521	63 and over.....	1	1			
25 and over but under 36.....	46	72	10,138	9,422,571	13,832,227	CLAY, total.....	9	11	210	153,112	601,682
36 and over but under 40.....	6	6	839	988,980	1,442,339	36 and over but under 40.....	1	1			
40.....	52	61	6,845	7,918,739	12,877,053	Over 48 but under 54.....	1	2	210	153,112	601,682
Over 40 but under 44.....	1	1				54 and over but under 63.....	7	8			
44 and over but under 48.....	13	14	1,683	1,714,513	2,657,785						
48.....	176	190	28,451	32,816,884	52,299,112						
Over 48 but under 54.....	3	3	149	104,218	133,140						
54 and over but under 63.....	15	21	4,517	5,981,004	9,036,969						
LIMESTONE, total <sup>1</sup> .....	47	48	1,083	836,711	2,244,643						
Under 25.....	1	1									
40.....	2	2	20	12,540	50,775						

<sup>1</sup> See headnote.

TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 129 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 detailed power-equipment information. Of the 422 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 19]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—							
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	5,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	403	12	56	95	81	75	64	15	5
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	313,629	205	3,139	15,745	28,886	52,527	94,988	51,873	66,266
Prime movers, total horsepower.....	76,570	167	1,714	6,940	10,836	18,104	15,387	11,736	11,689
Steam engines—									
Number.....	429	2	36	75	76	112	79	44	5
Horsepower.....	50,514	37	1,432	5,716	9,376	16,325	10,670	6,426	526
Steam turbines—									
Number.....	32			1	2	3	8	3	15
Horsepower.....	20,883			200	567	550	3,721	4,685	11,160
Internal-combustion engines—									
Number.....	157	13	22	36	8	50	10	18	
Horsepower.....	5,173	130	282	1,024	893	1,229	990	625	
Horsepower rating of inactive prime movers, included above.....	4,406		10	12	350	958	1,146	1,930	
Electric motors driven by purchased energy—									
Number.....	7,355	4	101	404	953	1,104	3,176	1,219	304
Horsepower.....	237,059	38	1,425	8,805	18,060	34,423	79,601	40,137	54,580
Electric motors driven by energy generated by enterprises reporting:									
Number.....	2,029	2	4	112	266	374	356	318	597
Horsepower.....	50,206	8	337	2,119	9,847	8,761	8,868	7,357	12,909
Electric generators:									
Number.....	140	1	2	18	39	46	22	6	6
Kilowatts.....	33,364	15	45	2,243	5,884	7,920	5,400	3,750	8,107

<sup>1</sup> See headnote.

<sup>2</sup> See Table 8 for total horsepower rating of power equipment for all enterprises.

## MINES AND QUARRIES—KENTUCKY

TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.....	57,818	58,514	58,940	58,692	56,934	56,264	<b>55,930</b>	56,376	57,403	57,516	59,217	58,977	58,000	94.4
Coal, bituminous.....	54,904	56,243	56,696	55,745	53,570	52,755	<b>52,340</b>	52,865	54,065	54,605	56,462	56,473	56,971	91.9
Limestone.....	1,147	755	<i>726</i>	1,019	1,310	1,330	1,438	1,447	1,300	1,135	1,251	1,115	888	50.2
Asphalt and bituminous rock.....	688	507	537	830	829	916	973	969	963	573	474	410	261	26.3
Fluorspar.....	529	592	565	602	637	645	548	474	522	491	439	438	399	61.9
Sand and gravel.....	249	<i>165</i>	167	187	271	293	301	300	296	282	274	255	192	54.8
Clay.....	210	208	<i>205</i>	<i>205</i>	206	213	212	215	213	213	213	207	210	95.3
Stone, miscellaneous.....	63	<i>33</i>	<i>33</i>	63	74	77	77	74	74	77	77	63	33	42.9
Other industries.....	28	<i>11</i>	<i>11</i>	41	37	35	41	32	30	30	27	16	16	26.8

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises]

	Total <sup>1</sup>	Coal, bituminous <sup>1</sup>	Limestone	Asphalt and bituminous rock	Sand and gravel	Fluorspar	Clay	Stone, miscellaneous	Other industries <sup>2</sup>
Number of enterprises <sup>3</sup> .....	551	434	57	5	11	10	9	13	6
Number of mines and quarries.....	629	500	68	6	12	23	11	13	6
Persons engaged in industry, total (all classes).....	61,241	57,012	1,303	787	306	590	232	30	31
Proprietors and firm members.....	210	128	61	-----	1	4	3	13	-----
Principal salaried officers of corporations <sup>4</sup> .....	480	419	16	18	16	5	5	1	1
Other salaried officers and employees <sup>4</sup> .....	2,733	2,461	80	81	40	52	14	3	2
Wage earners (average for the year).....	57,818	54,904	1,147	688	249	529	210	63	28
Principal expenses:									
Salaries and wages—									
Principal officers of corporations <sup>4</sup> .....	\$1,574,537	\$1,247,304	\$51,100	\$150,260	\$63,640	\$35,633	\$21,300	\$1,800	\$3,500
Other salaried officers and employees <sup>4</sup> .....	\$5,014,568	\$4,533,113	\$120,800	\$133,894	\$76,846	\$111,563	\$26,452	\$5,000	\$2,400
Wage earners.....	\$92,783,640	\$90,155,095	\$883,724	\$689,028	\$346,903	\$487,580	\$153,112	\$54,534	\$18,004
Contract work.....	\$71,736	\$41,403	\$18,587	\$7,831	-----	-----	-----	-----	-----
Supplies.....	\$12,094,202	\$10,023,814	\$304,540	\$244,905	\$143,225	\$374,649	\$31,756	\$9,510	\$1,794
Fuel.....	\$909,957	\$564,584	\$78,043	\$84,880	\$96,767	\$77,032	\$4,811	\$2,500	\$1,390
Purchased electric energy.....	\$3,095,216	\$2,677,508	\$73,033	\$15,018	\$12,780	\$13,521	\$1,500	-----	\$1,250
Expenditures for development (included above in "Principal expenses").....	\$1,643,000	\$1,550,000	\$10,000	\$2,000	-----	\$70,000	\$2,000	-----	-----
Value of products.....	\$103,849,025	\$95,647,618	\$2,336,085	\$2,293,577	\$1,347,598	\$1,323,733	\$691,082	\$149,140	\$55,192
Machinery and other equipment purchased during the year, total cost.....	\$3,031,321	\$2,713,015	\$118,244	\$50,245	\$56,199	\$75,613	\$8,005	\$10,000	-----
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	317,073	290,985	9,127	6,147	7,309	3,108	515	517	265
Prime movers, total horsepower <sup>5</sup> .....	79,404	50,022	5,085	4,747	6,067	2,918	369	381	215
Steam engines—									
Number.....	514	295	65	54	59	22	3	13	3
Horsepower.....	53,348	37,624	4,354	3,797	4,417	2,460	105	381	210
Steam turbines—									
Number.....	32	30	1	-----	1	-----	-----	-----	-----
Horsepower.....	20,883	20,583	250	-----	50	-----	-----	-----	-----
Internal-combustion engines—									
Number.....	157	24	29	24	24	42	13	-----	1
Horsepower.....	5,173	815	1,081	950	1,600	458	264	-----	5
Electric motors driven by purchased energy—									
Number.....	7,428	7,261	91	18	32	6	11	7	2
Horsepower.....	238,569	231,969	3,442	1,400	1,242	190	146	136	50
Electric motors driven by energy generated by enterprises reporting:									
Number.....	2,029	1,971	7	17	3	29	2	-----	-----
Horsepower.....	50,206	48,605	200	556	110	727	8	-----	-----
Electric generators: <sup>6</sup>									
Number.....	140	125	1	5	1	7	1	-----	-----
Kilowatts.....	33,364	32,309	175	345	60	460	15	-----	-----
Fuel and electric energy consumed:									
Fuel—									
Coal, bituminous..... tons, 2,000 pounds.....	541,146	492,628	24,701	29,895	26,832	24,844	618	665	960
Coke..... tons, 2,000 pounds.....	750	750	-----	-----	-----	-----	-----	-----	-----
Fuel oils..... gallons.....	223,821	2,089	17,350	48,292	77,610	70,689	1,800	-----	-----
Gasoline and kerosene..... gallons.....	325,335	29,134	95,700	20,418	99,400	64,683	11,400	4,000	600
Gas, natural..... M cubic feet.....	102,345	102,845	-----	-----	-----	-----	-----	-----	-----
Electric energy—									
Purchased..... kw.-hours.....	175,731,000	171,230,702	2,569,080	637,379	738,200	501,939	33,300	-----	20,400
Generated by enterprises reporting..... kw.-hours.....	55,829,180	52,660,156	74,500	1,776,524	300,000	1,014,100	3,600	-----	300

<sup>1</sup> Not including data for 1 coal-mining enterprise on Kentucky-West Virginia State line reported as a West Virginia operation.<sup>2</sup> Sand, molding, 4 enterprises; sandstone, 2.<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>5</sup> Includes 4,406 horsepower for inactive prime movers.<sup>6</sup> Includes 2,735 kilowatts for inactive generators.

# LOUISIANA

On the basis of the industries canvassed for 1929, Louisiana ranked forty-third among the States in value of mineral products and forty-fourth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.)

The only industry in Louisiana for which statistics can be presented for 1929 was the excavation of sand and gravel. Production was reported for the limestone industry by one enterprise, but in order to avoid disclosure of the operations of this enterprise, the data have been omitted from the statistics shown for this State and included with the statistics presented for the industry.

TABLE 1.—CHARACTER OF ORGANIZATION, FOR THE SAND AND GRAVEL INDUSTRY: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
SAND AND GRAVEL, total.....	17	18	439	\$2,031,239
Corporations.....	14	15	405	1,002,549
Other <sup>1</sup> .....	3	3	34	128,690

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

TABLE 2.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR THE SAND AND GRAVEL INDUSTRY: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
SAND AND GRAVEL, total.....	17	18	439	\$442,098	\$2,031,239
6 to 20.....	10	10	127	111,582	384,431
21 to 50.....	5	5	312	330,516	1,046,808
51 to 100.....	2	3			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

TABLE 5.—WAGE EARNERS, BY MONTHS, FOR THE SAND AND GRAVEL INDUSTRY: 1929

[The month of maximum employment 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum is of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
Sand and gravel.....	439	<b>368</b>	375	415	408	400	435	467	454	448	501	495	408	73.5

TABLE 3.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR THE SAND AND GRAVEL INDUSTRY: 1929

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
SAND AND GRAVEL, total.....	17	18	439	\$442,098	\$2,031,239
Over 40 but under 44.....	1	1	40	37,451	175,025
Over 48 but under 54.....	2	2			
54 and over but under 63.....	9	9	244	261,690	1,093,344
63 and over.....	5	6	149	142,951	757,270

TABLE 4.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—			
		100 to 249	250 to 499	500 to 999	1,000 or more
Number of enterprises reporting power equipment.....	17	5	4	3	5
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	13,898	1,076	1,214	1,902	9,616
Prime movers, total horsepower.....	5,462	686	1,139	1,776	1,862
Steam engines—					
Number.....	18	2		7	9
Horsepower.....	2,780	230		1,200	1,300
Internal-combustion engines—					
Number.....	31	3	11	9	8
Horsepower.....	2,732	456	1,130	575	502
Horsepower rating of inactive prime movers, included above.....	50		50		
Electric motors driven by purchased energy—					
Number.....	102	8	2	4	88
Horsepower.....	8,436	390	75	217	7,754

## MINES AND QUARRIES—LOUISIANA

TABLE 6.—DETAILED STATISTICS FOR THE SAND AND GRAVEL INDUSTRY: 1929<sup>1</sup>

Number of enterprises <sup>2</sup> .....	17	Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	13,398
Number of mines and quarries.....	18	Prime movers, total horsepower <sup>4</sup> .....	5,462
Persons engaged in industry, total (all classes).....	512	Steam engines—	
Proprietors and firm members.....	1	Number.....	18
Principal salaried officers of corporations <sup>3</sup> .....	24	Horsepower.....	2,730
Other salaried officers and employees <sup>3</sup> .....	48	Internal-combustion engines—	
Wage earners (average for the year).....	439	Number.....	31
Principal expenses:		Horsepower.....	2,732
Salaries and wages—		Electric motors driven by purchased energy—	
Principal officers of corporations <sup>3</sup> .....	\$118,800	Number.....	102
Other salaried officers and employees <sup>3</sup> .....	102,490	Horsepower.....	8,436
Wage earners.....	442,098	Fuel and electric energy consumed:	
Contract work.....	1,000	Fuel—	
Supplies.....	340,676	Coal, bituminous..... tons, 2,000 pounds.....	7,835
Fuel.....	116,496	Fuel oils..... gallons.....	1,354,119
Purchased electric energy.....	214,840	Gasoline and kerosene..... gallons.....	41,702
Value of products.....	2,081,239	Electric energy, purchased..... kw.-hours.....	10,819,053
Machinery and other equipment purchased during the year, total cost.....	128,066		

<sup>1</sup> Statistics for 1 enterprise reporting limestone are not shown, to avoid disclosure of individual operations.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>4</sup> Includes 50 horsepower for inactive prime movers.

## MAINE

On the basis of the industries canvassed for 1929, Maine ranked fortieth among the States in value of mineral products and thirty-ninth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) The value of products, as shown in Table 1, was 90.2 per cent greater in 1929 than in 1919. The greatest increase occurred in the leading industry—the quarrying of granite—for which the value of products was larger by \$854,644, or 65.7 per cent, in 1929 than in 1919.

The corporation was the dominant form of organization among enterprises in the mining industries in Maine in 1929. As shown in Table 2, corporations operated 55.8 per cent of all enterprises, employed 89.2 per cent of the wage earners, and produced 92 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 3 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises employing wage earners, 74.5 per cent were in classes having not more than 20 wage earners. These employed 22.1 per cent of the total number and contributed 24.8 per cent of the total value of products.

The statistics for the number of hours in the working week for wage earners, given in Table 4, show that

the "44 and over but under 48" class predominated, while the "54 and over but under 63" class ranked second. In the granite industry 75.6 per cent of the wage earners were in the "44 and over but under 48" class. In the limestone industry the longer working week prevailed.

Table 5 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 9 enterprises in the "500 or more" horsepower group reported 7,412 horsepower, or 63.3 per cent. This amount, together with 2,320 horsepower reported by 6 enterprises in the next smaller group, represents 83.1 per cent of the total shown.

The statistics for wage earners presented in Table 6, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 7 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The granite industry ranked first in the State, accounting for 62.2 per cent of the total value of products, while Maine ranked sixth among the States in 1929 in the granite industry.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES		Per cent of increase or decrease (-)		ALL MINING AND QUARRYING INDUSTRIES		Per cent of increase or decrease (-)
	1929	1919			1929	1919	
Number of enterprises <sup>2</sup> .....	52	50	(3)	Principal expenses: <sup>6</sup> Salaries..... Wages..... Contract work..... Supplies and materials..... Fuel..... Purchased electric energy..... Value of products <sup>7</sup> .....	\$212,693	\$118,279	79.8
Number of mines and quarries.....	56	51	(9)		1,576,518	1,051,796	49.9
Persons engaged, total.....	1,284	1,093	17.5		8,160	32,368	-74.8
Proprietors and firm members.....	20	52	(3)		267,117	203,187	31.5
Salaried employees.....	485	62	(3)		52,538	77,561	-32.3
Wage earners (average for the year) <sup>3</sup> .....	1,170	979	19.6		101,673	45,231	124.8
Power equipment (total horsepower).....	12,076	6,277	92.4		3,468,040	1,823,442	90.2

<sup>1</sup> The figures for 1929 and 1919 are not strictly comparable, due to inclusion in 1929 of data for 2 enterprises in the sand and gravel industry, not canvassed for 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Per cent not computed where base is less than 100.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

## MINES AND QUARRIES—MAINE

TABLE 2.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	52	56	1,170	\$3,468,040	LIMESTONE, total.....	4	4	114	\$423,571
Corporations.....	29	30	1,044	3,191,023	Corporations <sup>2</sup> .....	4	4	114	423,571
Other <sup>1</sup> .....	23	26	126	277,017	FELDSPAR, total.....	11	14	82	338,496
GRANITE, total.....	30	30	881	2,155,640	Corporations.....	5	5	58	300,818
Corporations.....	10	16	793	1,943,801	Other <sup>1</sup> .....	6	9	24	37,678
Other <sup>1</sup> .....	14	14	88	211,839					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.<sup>2</sup> Includes 1 other form of organization.

TABLE 3.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total <sup>3</sup> .....	51	55	1,170	\$1,576,518	\$3,461,790	GRANITE—Continued.					
1 to 5.....	21	21	64	73,529	162,530	21 to 50.....	6	6	195	\$302,281	\$635,027
6 to 20.....	17	21	194	220,050	694,387	51 to 100.....	1	1	674	755,471	1,246,448
21 to 50.....	8	8	275	421,207	1,124,480	101 to 250.....	3	3			
51 to 100.....	2	2	637	861,726	1,480,303	LIMESTONE, total.....	4	4	114	180,476	423,571
101 to 250.....	3	3				1 to 5.....	1	1			
GRANITE, total <sup>3</sup> .....	29	29	881	1,188,248	2,140,300	6 to 20.....	1	1	114	180,476	423,571
1 to 5.....	11	11	31	40,302	98,132	21 to 50.....	1	1			
6 to 20.....	8	8	81	90,194	168,888	51 to 100.....	1	1			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>3</sup> Exclusive of 1 enterprise employing no wage earners.

TABLE 4.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Maine was 9, distributed as follows: Granite, 8; stone, miscellaneous, 1. The combined value of products represented by these enterprises was \$67,183.]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	43	47	1,144	\$1,544,214	\$3,400,857	GRANITE, total <sup>1</sup> .....	22	22	860	\$1,161,920	\$2,005,687
25 and over but under 36.....	1	1				25 and over but under 36.....	1	1			
36 and over but under 40.....	1	1				36 and over but under 40.....	1	1			
40.....	1	1	73	125,588	183,492	40.....	1	1			
44 and over but under 48.....	15	15	671	870,626	1,595,186	44 and over but under 48.....	13	13	650	854,078	1,535,779
48.....	5	5	134	177,751	371,583	48.....	3	3	127	170,667	342,700
Over 48 but under 54.....	5	8	67	97,211	308,914	54 and over but under 63.....	3	3	10	11,506	33,626
54 and over but under 63.....	14	16				LIMESTONE, total.....	4	4	114	180,476	423,571
63 and over.....	1	1	169	278,138	851,682	54 and over but under 63.....	3	3			
						63 and over.....	1	1	114	180,476	423,571

<sup>1</sup> See headnote.

TABLE 5.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 9 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 detailed power-equipment information. Of the 43 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 3]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 25	25 to 99	100 to 249	250 to 499	500 or more			Less than 25	25 to 99	100 to 249	250 to 499	500 or more	
Number of enterprises reporting power equipment <sup>1</sup> .....	40	6	11	8	6	9	Prime movers and electric motors—Con. Horsepower rating of inactive prime movers, included above.....	43	3	40				
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	11,710	112	707	1,159	2,320	7,412	Electric motors driven by purchased energy—							
Prime movers, total horsepower.....	3,085	92	290	306	480	1,917	Number.....	194	1	13	25	37	118	
Horsepower.....							Horsepower.....	8,625	20	417	853	1,840	5,495	
Steam engines--							Electric motors driven by energy generated by enterprises reporting:							
Number.....	27		3		7	17	Number.....	2					2	
Horsepower.....	2,237		115		480	1,042	Horsepower.....	266					266	
Steam turbines--							Electric generators:							
Number.....	1					1	Number.....	2					2	
Horsepower.....	275					275	Kilowatts.....	200					200	
Internal-combustion engines--														
Number.....	20	6	6	8										
Horsepower.....	573	92	175	306										

<sup>1</sup> See headnote.

<sup>2</sup> See Table 7 for total horsepower rating of power equipment for all enterprises.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimums of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
ALL INDUSTRIES, total.....	1,170	609	<i>541</i>	1,130	1,330	1,399	1,456	1,427	1,418	1,339	1,262	1,119	1,012	37.2
Granite.....	881	379	<i>310</i>	870	1,035	1,053	1,104	1,099	1,066	1,044	988	872	777	28.1
Limestone.....	114	104	<i>93</i>	114	123	131	128	123	124	111	114	102	105	71.0
Feldspar.....	32	58	<i>61</i>	63	72	112	118	116	111	80	79	68	49	41.2
Other industries.....	93	68	<i>77</i>	83	100	103	105	119	117	104	81	82	81	57.1

## MINES AND QUARRIES—MAINE

TABLE 7.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. One of the "Other industries," however, was of greater importance in the State than one of the industries shown separately]

	Total	Granite	Limestone	Feldspar	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	52	30	4	11	7
Number of mines and quarries.....	56	30	4	14	8
Persons engaged in industry, total (all classes).....	1,284	947	123	111	103
Proprietors and firm members.....	29	18	—	7	4
Principal salaried officers of corporations <sup>3</sup> .....	21	12	3	5	1
Other salaried officers and employees <sup>4</sup> .....	64	36	6	17	5
Wage earners (average for the year).....	1,170	881	114	82	93
Principal expenses:					
Salaries and wages—					
Principal officers of corporations <sup>3</sup> .....	\$77,527	\$51,143	\$5,444	\$19,500	\$1,440
Other salaried officers and employees <sup>3</sup> .....	\$135,166	\$77,117	\$13,840	\$31,100	\$13,100
Wage earners.....	\$1,576,518	\$1,188,248	\$180,476	\$79,410	\$128,384
Contract work.....	\$3,160	—	\$3,160	—	—
Supplies.....	\$207,117	\$52,089	\$61,019	\$97,773	\$55,036
Fuel.....	\$52,698	\$45,462	\$728	\$3,297	\$3,061
Purchased electric energy.....	\$101,673	\$45,114	\$21,911	\$14,846	\$19,802
Expenditures for development (included above in "Principal expenses").....	\$97,000	\$23,000	\$27,000	\$4,000	\$13,000
Value of products.....	\$3,468,040	\$2,155,640	\$423,571	\$338,496	\$550,333
Machinery and other equipment purchased during the year, total cost.....	\$54,562	\$16,106	\$9,380	\$3,400	\$25,067
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	12,076	6,345	2,130	1,099	2,502
Prime movers, total horsepower <sup>4</sup> .....	3,176	2,519	—	157	500
Steam engines—					
Number.....	31	26	—	—	5
Horsepower.....	2,328	1,828	—	—	500
Steam turbines—					
Number.....	1	1	—	—	—
Horsepower.....	275	275	—	—	—
Internal-combustion engines—					
Number.....	20	11	—	9	—
Horsepower.....	573	416	—	157	—
Electric motors driven by purchased energy—					
Number.....	203	62	61	22	58
Horsepower.....	8,900	3,826	2,130	942	2,002
Electric motors driven by energy generated by enterprises reporting:					
Number.....	2	2	—	—	—
Horsepower.....	266	266	—	—	—
Electric generators:					
Number.....	2	2	—	—	—
Kilowatts.....	200	200	—	—	—
Fuel and electric energy consumed:					
Fuel—					
Coal—					
Anthracite..... tons, 2,240 pounds.....	2,082	2,030	—	52	—
Bituminous..... tons, 2,000 pounds.....	4,284	3,300	125	6	353
Coke..... tons, 2,000 pounds.....	76	—	—	76	—
Fuel oils..... gallons.....	9,860	9,051	—	89	510
Gasoline and kerosene..... gallons.....	23,060	4,036	—	16,519	1,611
Electric energy—					
Purchased..... kw.-hours.....	5,004,412	2,112,872	686,372	1,072,381	1,132,787
Generated by enterprises reporting..... kw.-hours.....	70,000	70,000	—	—	—

<sup>1</sup> Basalt, 1 enterprise; mica, 1; sand and gravel, 2; slate, 2; stone, miscellaneous, 1.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>4</sup> Includes 43 horsepower for inactive prime movers.

# MARYLAND

On the basis of the industries canvassed for 1929, Maryland ranked thirty-second among the States in value of mineral products and twenty-seventh in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the 1929 figures to exclude data for the sand and gravel industry, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 24.3 per cent less in 1929 than in 1919. While most of the industries in the State contributed increases in the value of products, the bituminous-coal industry declined considerably during the decade as shown in Table 2.

The corporation was the dominant form of organization among enterprises in the mining industries in Maryland in 1929. As shown in Table 3, corporations operated 65.2 per cent of all enterprises, employed 91.2 per cent of the wage earners, and produced 93.2 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in Maryland, 75 per cent were in classes having not more than 50 wage earners. These enterprises employed

only 28.1 per cent of the total number of wage earners and contributed 28.4 per cent of the total value of products.

The statistics for the length of the working week, given in Table 5, show that 62.6 per cent of all wage earners were employed 48 hours per week, while 29 per cent were employed 54 hours or more. In the bituminous-coal industry practically all of the wage earners were employed 48 hours. In the sand and gravel and the limestone industries the longer working week predominated.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 9 enterprises in the "1,000 to 2,499" horsepower group reported 15,508 horsepower, or 46.1 per cent, while all enterprises reporting 250 or more accounted for 30,498 horsepower, or 90.7 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The bituminous-coal industry ranked first in the State, accounting for 42.7 per cent of the total value of products. This industry, together with the sand and gravel and the limestone industries, produced 86.1 per cent of the total.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)
	1929		1919			1929		1919	
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>3</sup> .....	112	102	126	-19.0	Principal expenses: <sup>7</sup>				
Number of mines and quarries.....	130	119	161	-28.1	Salaries.....	\$851,073	\$518,658	\$789,659	-34.3
Persons engaged, total.....	4,978	4,269	6,116	-30.2	Wages.....	4,815,794	4,126,442	6,161,744	-32.9
Proprietors and firm members.....	45	42	84	( <sup>4</sup> )	Contract work.....	397	397	16,899	-97.7
Salaried employees.....	\$356	\$240	404	-40.6	Supplies and materials.....	2,376,924	955,299	1,178,074	-15.9
Wage earners (average for the year) <sup>5</sup> .....	4,678	3,987	5,628	-29.2	Fuel.....	276,135	84,459	247,537	-65.9
Power equipment (total horsepower).....	34,906	23,967	18,660	28.4	Purchased electric energy.....	335,410	251,511	60,929	312.8
					Value of products <sup>8</sup> .....	11,122,195	7,341,258	9,698,577	-24.3

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

## MINES AND QUARRIES—MARYLAND

TABLE 2.—SUMMARY FOR BITUMINOUS-COAL INDUSTRY: 1929 AND 1919

	1929	1919 <sup>1</sup>	Per cent of increase or decrease (-)		1929	1919 <sup>1</sup>	Per cent of increase or decrease (-)	
Number of enterprises <sup>2</sup> .....	52	58	(*)	Principal expenses—Continued. Supplies and materials.....	\$540,026	\$929,325	-41.9	
Number of mines.....	63	92	(*)		Fuel.....	\$24,869	\$133,388	-81.4
Wage earners (average for the year) <sup>3</sup> .....	3,042	4,826	-37.0		Purchased electric energy.....	\$129,680	\$50,041	159.1
Power equipment (total horsepower).....	11,444	12,470	-8.2	Value of products, total.....	\$4,745,279	\$8,195,667	-42.1	
Principal expenses: <sup>5</sup>				Coal:				
Salaries.....	\$335,330	\$679,177	-50.6	Quantity (tons, 2,000 pounds).....	2,638,216	2,997,336	-12.0	
Wages.....	\$3,114,226	\$5,336,509	-42.2	Value at mine.....	\$4,744,815	\$8,195,667	-42.1	
Contract work.....		\$11,345		Other products.....	\$464			

<sup>1</sup> Includes 1 coal-mining enterprise on Maryland-Pennsylvania State line reported as a Maryland operation.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Per cent not computed where base is less than 100.

<sup>4</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>5</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>6</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	112	130	4,578	\$11,122,195	LIMESTONE, total.....	20	23	409	\$1,053,738
Corporations.....	73	87	4,176	10,367,328	Corporations.....	10	12	295	824,041
Other <sup>1</sup> .....	39	43	402	754,867	Other <sup>1</sup> .....	10	11	114	228,797
COAL, BITUMINOUS, total.....	52	63	3,042	4,745,279	BASALT, total.....	7	7	232	599,034
Corporations.....	34	45	2,839	4,452,159	Corporations.....	4	4	190	496,040
Other <sup>1</sup> .....	18	18	203	293,120	Other <sup>1</sup> .....	3	3	42	102,994
SAND AND GRAVEL, total.....	10	11	591	3,780,937	GRANITE, total.....	6	8	113	261,259
Corporations <sup>2</sup> .....	10	11	591	3,780,937	Corporations <sup>3</sup> .....	6	8	113	261,259

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

<sup>2</sup> Includes 2 other forms of organization.

<sup>3</sup> Includes 1 other form of organization.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	112	130	4,578	\$4,815,794	\$11,122,195	LIMESTONE, total.....	20	23	409	\$411,937	\$1,053,738
1 to 5.....	28	29	74	73,362	169,687	1 to 5.....	6	6	18	18,562	30,697
6 to 20.....	31	33	429	419,638	1,052,574	6 to 20.....	8	8	133	118,508	249,358
21 to 50.....	25	29	785	872,907	1,940,625	21 to 50.....	4	5	268	274,867	767,683
51 to 100.....	11	14	789	736,697	1,399,181	51 to 100.....	2	4			
101 to 250.....	16	24	2,501	2,718,190	6,560,178	BASALT, total.....	7	7	232	245,100	599,034
251 to 500.....	1	1				6 to 20.....	4	4	58	76,835	149,171
COAL, BITUMINOUS, total.....	52	63	3,042	3,114,226	4,745,279	21 to 50.....	1	1	174	168,271	410,893
1 to 5.....	11	11	30	27,561	49,901	51 to 100.....	2	2			
6 to 20.....	10	10	110	101,573	170,474	GRANITE, total.....	6	8	113	103,597	261,259
21 to 50.....	11	13	369	359,672	589,718	1 to 5.....	1	1	113	103,597	261,259
51 to 100.....	7	8	535	598,830	731,007	6 to 20.....	3	5			
101 to 250.....	12	20	1,998	2,125,534	3,253,579	21 to 50.....	2	2			
251 to 500.....	1	1				SAND AND GRAVEL, total.....	10	11	591	690,352	3,780,937
SAND AND GRAVEL, total.....	10	11	591	690,352	3,780,937	1 to 5.....	1	1	89	102,096	474,338
1 to 5.....	1	1				6 to 20.....	3	3			
6 to 20.....	3	3				21 to 50.....	2	3			
21 to 50.....	2	3				101 to 250.....	4	4	592	587,650	3,306,599
101 to 250.....	4	4	592	587,650	3,306,599						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

# MINES AND QUARRIES—MARYLAND

137

**TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Maryland was 26, distributed as follows: Basalt, 1; coal, bituminous, 21; limestone, 1; stone, miscellaneous, 3. The combined value of products represented by these enterprises was \$244,611.]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup>	86	104	4,398	\$4,661,418	\$10,877,584	LIMESTONE, total <sup>1</sup> .....	10	22	403	\$405,385	\$1,039,214
25 and over but under 36.....	3	4				44 and over but under 48.....	3	3	60	45,591	86,349
40.....	1	1	137	156,171	310,686	48.....	1	1			
Over 40 but under 44.....	1	1				Over 48 but under 54.....	3	3	59	70,116	185,918
44 and over but under 48.....	7	9	108	83,063	183,329	54 and over but under 63.....	12	15	284	289,678	766,947
48.....	31	42	2,754	2,840,637	4,369,527	BASALT, total <sup>1</sup> .....	6	6	226	238,006	589,304
Over 48 but under 54.....	6	6	122	141,248	313,053	Over 40 but under 44.....	1	1			
54 and over but under 63.....	34	38	1,277	1,431,299	5,700,989	Over 48 but under 54.....	1	1	226	238,006	589,304
63 and over.....	3	3				54 and over but under 63.....	4	4			
COAL, BITUMINOUS, total <sup>1</sup> .....	31	42	2,881	2,981,202	4,546,842	GRANITE, total.....	6	8	113	103,507	261,259
25 and over but under 36.....	2	3				44 and over but under 48.....	2	4	56	42,742	89,297
48.....	28	38	2,881	2,981,202	4,546,842	Over 48 but under 54.....	1	1			
54 and over but under 63.....	1	1				54 and over but under 63.....	3	3	57	60,855	171,962
SAND AND GRAVEL, total.....	10	11	591	690,352	3,780,937						
25 and over but under 36.....	1	1									
54 and over but under 63.....	6	7	591	690,352	3,780,937						
63 and over.....	3	3									

<sup>1</sup> See headnote.

**TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929**

[This table does not include data for 26 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 detailed power-equipment information. Of the 86 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 8.]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499
Number of enterprises reporting power equipment <sup>1</sup> .....	78	4	22	12	20	11	9
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	33,638	80	1,153	1,907	7,209	7,781	15,508
Prime movers, total horsepower.....	12,798	42	478	845	3,267	1,845	6,321
Steam engines—							
Number.....	135		10	11	26	12	76
Horsepower.....	10,952		260	805	2,151	1,805	5,931
Steam turbines—							
Number.....	4						4
Horsepower.....	150						150
Internal-combustion engines—							
Number.....	36	2	13	1	17	1	2
Horsepower.....	1,656	42	218	40	1,076	40	240
Water wheels and water turbines—							
Number.....	1				1		
Horsepower.....	40				40		
Horsepower rating of inactive prime movers, included above.....	307				275		10
Electric motors driven by purchased energy—							
Number.....	682	4	39	44	178	192	225
Horsepower.....	20,840	38	675	1,002	3,942	5,936	9,187
Electric motors driven by energy generated by enterprises reporting:							
Number.....	104			9	75	20	
Horsepower.....	2,256			285	1,360	621	
Electric generators:							
Number.....	10			2	6	2	
Kilowatts.....	1,500			275	775	450	

<sup>1</sup> See headnote.

<sup>2</sup> See Table 8 for total horsepower rating of power equipment for all enterprises.

**TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929**

[The month of maximum employment 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 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, total.....	4,578	<b>4,837</b>	4,866	4,567	4,538	4,502	4,476	4,654	4,613	4,699	4,852	4,795	4,637	89.4
Coal, bituminous.....	3,042	<b>3,173</b>	3,213	3,172	2,993	2,842	<i>2,784</i>	2,949	2,893	2,974	3,134	3,176	3,207	86.6
Sand and gravel.....	591	<i>536</i>	540	598	594	619	627	627	620	620	600	581	547	85.6
Limestone.....	409	<b>311</b>	<i>300</i>	346	377	411	423	459	477	480	507	497	354	69.2
Basalt.....	282	<i>82</i>	106	226	270	293	286	282	278	289	272	248	145	27.7
Granite.....	113	<i>69</i>	71	76	120	126	136	131	130	131	128	128	107	50.7
Marble and slate.....	87	<i>85</i>	57	77	78	110	104	101	104	93	86	80	65	61.8
Stone, miscellaneous.....	31	<i>16</i>	16	37	33	33	33	32	35	33	33	33	35	43.2
Other industries.....	78	<i>65</i>	63	65	68	68	73	73	76	70	83	82	77	75.9

## MINES AND QUARRIES—MARYLAND

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Certain of the "Other industries," however, were of greater importance in the State than one of the industries shown separately.]

	Total	Coal, bituminous	Sand and gravel	Limestone	Basalt	Granite	Stone, miscellaneous	Marble and slate <sup>1</sup>	Other industries <sup>2</sup>
Number of enterprises <sup>3</sup> .....	112	52	10	20	7	6	5	3	9
Number of mines and quarries.....	130	63	11	23	7	8	5	3	10
Persons engaged in industry, total (all classes).....	4,978	3,202	700	458	251	127	37	106	88
Proprietors and firm members.....	45	21	3	9	7	-----	5	-----	-----
Principal salaried officers of corporation <sup>4</sup> .....	84	30	18	15	1	7	-----	8	5
Other salaried officers and employees <sup>4</sup> .....	271	109	97	25	11	7	1	11	10
Wage earners (average for the year).....	4,578	3,042	591	409	232	113	31	87	73
Principal expenses:									
Salaries and wages—									
Principal officers of corporations <sup>4</sup> .....	\$307,161	\$95,324	\$125,585	\$43,133	\$2,208	\$10,060	-----	\$11,723	\$18,468
Other salaried officers and employees <sup>4</sup> .....	\$543,912	\$240,000	\$206,830	\$34,517	\$17,843	\$13,964	\$525	\$19,502	\$10,725
Wage earners.....	\$4,815,794	\$3,114,226	\$600,352	\$411,937	\$245,100	\$103,597	\$37,398	\$141,067	\$72,111
Contract work.....	\$397	-----	-----	\$170	-----	-----	-----	-----	\$227
Supplies.....	\$2,376,924	\$540,026	\$1,421,625	\$203,133	\$128,617	\$7,376	\$6,202	\$35,753	\$34,192
Fuel.....	\$276,138	\$24,869	\$191,632	\$25,024	\$9,444	\$6,004	\$252	\$10,039	\$8,224
Purchased electric energy.....	\$335,410	\$120,680	\$33,899	\$41,089	\$24,745	\$11,504	\$2,000	\$30,501	\$11,412
Expenditures for development (included above in "Principal expenses").....	\$115,000	\$91,000	-----	\$10,000	\$14,000	-----	-----	-----	-----
Value of products.....	\$11,122,195	\$4,745,279	\$3,780,937	\$1,053,738	\$599,034	\$261,259	\$69,852	\$334,018	\$278,078
Machinery and other equipment purchased during the year, total cost.....	\$457,887	\$50,339	\$200,431	\$17,500	\$168,335	\$388	-----	\$16,060	\$8,828
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	34,006	11,444	10,039	5,800	3,047	908	120	1,513	1,135
Prime movers, total horsepower <sup>5</sup> .....	12,960	3,364	6,021	2,346	422	78	65	100	564
Steam engines—									
Number.....	146	22	83	10	7	2	5	1	7
Horsepower.....	11,114	2,791	5,521	1,825	307	30	65	100	475
Steam turbines—									
Number.....	4	-----	4	-----	-----	-----	-----	-----	-----
Horsepower.....	150	-----	150	-----	-----	-----	-----	-----	-----
Internal-combustion engines—									
Number.....	36	5	5	10	5	4	-----	-----	7
Horsepower.....	1,656	573	350	481	115	48	-----	-----	39
Water wheels and water turbines—									
Number.....	1	-----	-----	1	-----	-----	-----	-----	-----
Horsepower.....	40	-----	-----	40	-----	-----	-----	-----	-----
Electric motors driven by purchased energy—									
Number.....	692	321	99	114	52	17	2	64	23
Horsepower.....	21,046	8,080	4,018	3,454	2,625	830	55	1,413	571
Electric motors driven by energy generated by enterprises reporting:									
Number.....	104	104	-----	-----	-----	-----	-----	-----	-----
Horsepower.....	2,256	2,256	-----	-----	-----	-----	-----	-----	-----
Electric generators: <sup>6</sup>									
Number.....	10	10	-----	-----	-----	-----	-----	-----	-----
Kilowatts.....	1,500	1,500	-----	-----	-----	-----	-----	-----	-----
Fuel and electric energy consumed:									
Fuel—									
Coal, bituminous..... tons, 2,000 pounds.....	55,363	12,531	31,139	5,145	2,465	1,003	47	1,501	1,532
Coke..... tons, 2,000 pounds.....	91	-----	-----	61	-----	-----	-----	30	-----
Fuel oils..... gallons.....	673,700	39,000	604,800	28,750	1,090	60	-----	-----	-----
Gasoline and kerosene..... gallons.....	145,101	10,855	97,762	18,046	2,000	1,122	-----	-----	5,416
Gas, natural..... M cubic feet.....	600	600	-----	-----	-----	-----	-----	-----	-----
Electric energy—									
Purchased..... kw.-hours.....	16,533,358	8,395,830	3,190,510	1,974,867	1,328,000	360,430	100,000	1,064,344	113,362
Generated by enterprises reporting..... kw.-hours.....	1,492,456	1,492,456	-----	-----	-----	-----	-----	-----	-----

<sup>1</sup> Marble, 1 enterprise; slate, 2.<sup>2</sup> Asbestos, 1 enterprise; clay, 1; feldspar, 2; sand, glass, 1; silica, 2; talc, 2.<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>5</sup> Includes 307 horsepower for inactive prime movers.<sup>6</sup> Includes 100 kilowatts for inactive generators.

## MASSACHUSETTS

On the basis of the industries canvassed for 1929, Massachusetts ranked thirty-third among the States in value of mineral products and thirty-sixth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the 1929 figures to exclude data for the sand and gravel industry, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 105.2 per cent greater in 1929 than in 1919. This increase was accounted for principally by the granite and basalt quarrying industries, for which comparative figures are given in Table 2.

The corporation was the dominant form of organization among enterprises in the mining industries in Massachusetts in 1929. As shown in Table 3, corporations operated 63.2 per cent of all enterprises, employed 86.5 per cent of the wage earners, and produced 87.1 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in Massachusetts, 87.4 per cent were in classes having not more than 50 wage earners. These enterprises employed 43 per cent of the total number of wage

earners and contributed 51.2 per cent of the total value of products.

The statistics for the number of hours in the working week for wage earners, given in Table 5, show that the "44 and over but under 48" class predominated, while the "54 and over but under 63" class ranked second. In the granite industry 81.8 per cent of the wage earners were in the "44 and over but under 48" class while for other industries as a whole the longer working week predominated.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 7 enterprises in the 1,000 to 2,499 horsepower group reported 11,093 horsepower, or 33.2 per cent. This amount, together with 10,458 horsepower reported by 15 enterprises in the next smaller group, represents 64.5 per cent of the total shown.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises. The granite industry ranked first in the State, accounting for 51.9 per cent of the total product. This industry, together with the basalt industry, produced 73 per cent of the total. Massachusetts ranked first among the States in 1929 in the granite industry and fourth in the basalt industry.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919		1929		1919	
	All industries	Revised (for comparative purposes) <sup>2</sup>			All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>3</sup> .....	95	73	74	( )				
Number of mines and quarries.....	104	77	79	( )				
Persons engaged, total.....	2,740	2,451	1,910	28.3				
Proprietors and firm members.....	40	34	50	( )				
Salaried employees.....	\$ 275	\$ 210	156	34.6				
Wage earners (average for the year) <sup>4</sup> .....	2,419	2,207	1,704	29.5				
Power equipment (total horsepower).....	33,417	26,741	12,493	114.0				
Principal expenses: <sup>5</sup>								
Salaries.....	\$ 821,373	\$ 869,614	\$ 324,602	106.3				
Wages.....	4,046,326	3,656,995	2,068,844	76.8				
Contract work.....	20,371	17,143	11,186	53.3				
Supplies and materials.....	1,111,884	1,005,716	494,249	103.5				
Fuel.....	227,440	108,396	186,694	-9.8				
Purchased electric energy.....	351,519	286,942	76,651	274.3				
Value of products <sup>6</sup> .....	10,387,614	8,570,583	4,175,699	105.2				

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

## MINES AND QUARRIES—MASSACHUSETTS

TABLE 2.—SUMMARY FOR GRANITE AND BASALT QUARRYING INDUSTRIES: 1929 AND 1919

	GRANITE <sup>1</sup>		BASALT		PER CENT OF INCREASE OR DECREASE (-)	
	1929	1919	1929	1919	Granite	Basalt
Number of enterprises <sup>2</sup> .....	38	42	14	21	( <sup>3</sup> )	( <sup>3</sup> )
Number of quarries.....	39	43	16	23	( <sup>3</sup> )	( <sup>3</sup> )
Wage earners (average for the year) <sup>4</sup> .....	1,554	1,034	366	547	50.3	-33.1
Power equipment (total horsepower).....	14,553	6,575	8,550	4,721	121.3	81.1
Principal expenses: <sup>5</sup>						
Salaries.....	\$527,073	\$176,544	\$75,542	\$135,405	200.3	-44.2
Wages.....	\$2,024,198	\$1,287,885	\$618,783	\$719,590	112.0	-14.0
Contract work.....	\$3,111	\$4,136	\$13,862	-----	-24.8	-----
Supplies and materials.....	\$469,607	\$237,897	\$372,994	\$229,244	97.4	62.7
Fuel.....	\$111,844	\$110,504	\$84,259	\$65,117	1.2	-47.4
Purchased electric energy.....	\$137,995	\$26,215	\$91,878	\$40,849	426.4	124.9
Value of products.....	\$5,394,350	\$2,405,165	\$2,191,366	\$1,548,611	124.3	41.5
Quantity (tons, 2,000 pounds).....	1,030,000	7884,000	1,921,000	7868,000	168.2	121.3

<sup>1</sup> See GENERAL EXPLANATIONS—Milling and Manufacturing.<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>3</sup> Per cent not computed where base is less than 100.<sup>4</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>5</sup> See GENERAL EXPLANATIONS—Expenses.<sup>6</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>7</sup> Quantity figures for 1919 not compiled by Census Bureau. Figures from Mineral Resources of the United States, 1919—U. S. Geological Survey. Figures for basalt include a small amount of miscellaneous unclassified stone.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	95	104	2,419	\$10,387,014	SAND AND GRAVEL, total.....	22	27	212	\$1,816,481
Corporations.....	60	66	2,092	9,042,310	Corporations.....	12	14	136	1,302,725
Other <sup>1</sup> .....	35	38	327	1,344,704	Other <sup>1</sup> .....	10	13	76	513,750
GRANITE, total.....	38	39	1,554	5,394,350	LIMESTONE, total.....	7	7	111	411,217
Corporations.....	22	23	1,387	4,860,058	Corporations.....	7	7	111	411,217
Other <sup>1</sup> .....	16	16	167	534,292	STONE, MISCELLANEOUS, total.....	5	6	88	314,228
BASALT, total.....	14	16	366	2,191,366	Corporations <sup>2</sup> .....	5	6	88	314,228
Corporations.....	9	11	312	1,991,082	MARBLE, total.....	4	4	68	202,001
Other <sup>1</sup> .....	5	5	54	199,384	Corporations <sup>2</sup> .....	4	4	68	202,001

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.<sup>2</sup> Includes 1 other form of organization.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBER OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBER OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	95	104	2,419	\$4,046,326	\$10,387,014	BASALT, total.....	14	16	366	\$618,783	\$2,191,366
1 to 5.....	22	24	66	85,185	424,521	1 to 5.....	1	1	81	133,541	346,404
6 to 20.....	45	48	524	846,274	2,689,605	6 to 20.....	7	7	74	120,748	397,505
21 to 50.....	16	17	451	734,919	2,205,076	21 to 50.....	3	3	211	355,404	1,447,397
51 to 100.....	8	11	526	849,684	2,364,415	51 to 100.....	2	5	212	389,331	1,816,481
101 to 250.....	3	3	852	1,530,264	2,703,397	SAND AND GRAVEL, total.....	22	27	212	389,331	1,816,481
251 to 500.....	1	1	852	1,530,264	2,703,397	1 to 5.....	7	9	22	36,544	248,900
GRANITE, total.....	38	39	1,554	2,624,198	5,394,350	6 to 20.....	14	17	190	852,787	1,667,572
1 to 5.....	9	9	27	35,587	133,741	21 to 50.....	1	1	111	157,204	411,217
6 to 20.....	12	12	143	222,589	852,316	LIMESTONE, total.....	7	7	111	157,204	411,217
21 to 50.....	9	10	276	445,602	1,018,984	6 to 20.....	5	5	111	157,204	411,217
51 to 100.....	4	4	256	390,256	685,012	21 to 50.....	2	2	111	157,204	411,217
101 to 250.....	3	3	852	1,530,264	2,703,397						
251 to 500.....	1	1	852	1,530,264	2,703,397						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

# MINES AND QUARRIES—MASSACHUSETTS

141

**TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929**

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	94	103	2,417	\$4,043,470	\$10,377,014	BASALT, total.....	14	16	306	\$618,783	\$2,191,366
40.....	3	4	83	121,568	280,031	48.....	3	5	95	178,098	685,820
Over 40 but under 44.....	1	1				54 and over but under 63.....	11	11	271	445,685	1,505,543
44 and over but under 48.....	27	27	1,209	2,206,272	4,033,763	SAND AND GRAVEL, total.....	22	27	212	339,331	1,816,481
48.....	17	22	271	467,912	1,904,113	44 and over but under 48.....	2	2			
Over 48 but under 54.....	7	8	56	71,696	253,305	48.....	5	8	97	190,777	960,028
54 and over but under 63.....	38	40	708	1,176,022	3,905,802	Over 48 but under 54.....	3	4			
63 and over.....	1	1				54 and over but under 63.....	11	12	115	198,554	856,453
GRANITE, total <sup>1</sup> .....	37	38	1,552	2,621,342	5,384,350	63 and over.....	1	1			
40.....	3	4	59	84,214	193,922	LIMESTONE, total.....	7	7	111	157,264	411,217
44 and over but under 48.....	23	23	1,270	2,145,505	3,867,580	Over 40 but under 44.....	1	1			
48.....	5	5				Over 48 but under 54.....	1	1	111	167,264	411,217
Over 48 but under 54.....	1	1	104	160,183	519,931	54 and over but under 63.....	5	5			
54 and over but under 63.....	5	5	119	231,490	802,917						

<sup>1</sup> Exclusive of 1 enterprise whose value of products was less than \$20,000.

**TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929**

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 100	100 to 249	250 to 499	500 to 999	1,000 to 2,499			Less than 100	100 to 249	250 to 499	500 to 999	1,000 to 2,499	
		Number of enterprises reporting power equipment <sup>1</sup> .....	92	24	28	18			15	7	Prime movers and electric motors—Con. Horsepower rating of inactive prime movers, included above.....	182	25	57
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	33,417	1,486	4,133	6,247	10,458	11,093	Electric motors driven by purchased energy—							
Prime movers, total horsepower.....	12,992	604	1,957	2,641	3,930	3,800	Number.....	554	30	74	140	128	182	
Steam engines—							Horsepower.....	20,425	882	2,176	3,606	6,528	7,233	
Number.....	163	5	16	20	38	84	Electric motors driven by energy generated by enterprises reporting:							
Horsepower.....	6,820	170	890	1,400	1,580	2,780	Number.....	26				25		
Steam turbines—							Horsepower.....	765				765		
Number.....	2		2				Electric generators:							
Horsepower.....	200		200				Number.....	2				2		
Internal-combustion engines—							Kilowatts.....	300				360		
Number.....	90	14	30	18	16	21								
Horsepower.....	5,787	434	867	1,056	2,350	1,080								
Water wheels and water turbines—														
Number.....	1			1										
Horsepower.....	185			185										

<sup>1</sup> No power equipment was reported by 3 enterprises.

**TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929**

[The month of maximum employment 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 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, total.....	2,419	1,884	1,961	2,189	2,604	2,732	2,676	2,688	2,773	2,616	2,611	2,484	1,807	65.2
Granite.....	1,554	1,350	1,463	1,540	1,672	1,729	1,657	1,618	1,713	1,568	1,610	1,589	1,159	65.7
Basalt.....	366	190	169	232	412	421	443	478	475	407	440	394	267	35.4
Sand and gravel.....	212	187	141	171	221	248	239	249	238	247	245	222	189	55.0
Limestone.....	111	109	109	128	130	118	115	106	104	109	105	104	95	73.1
Stone, miscellaneous.....	88	18	11	38	84	122	130	131	136	128	114	90	52	10.3
Marble.....	68	51	55	59	66	76	74	75	76	79	79	66	55	64.6
Other industries.....	20	29	10	21	19	18	18	31	31	18	18	19	13	32.3

## MINES AND QUARRIES—MASSACHUSETTS

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises.]

	Total	Granite	Basalt	Sand and gravel	Limestone	Stone, miscellaneous	Marble	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	95	38	14	22	7	5	4	5
Number of mines and quarries.....	104	39	10	27	7	6	4	5
Persons engaged in industry, total (all classes).....	2,740	1,734	394	289	121	95	78	29
Proprietors and firm members.....	46	26	4	12	-----	2	1	1
Principal salaried officers of corporations <sup>3</sup> .....	66	37	10	11	3	1	1	3
Other salaried officers and employees <sup>4</sup> .....	209	117	14	54	7	4	8	5
Wage earners (average for the year).....	2,419	1,554	380	212	111	88	68	20
Principal expenses:								
Salaries and wages—								
Principal officers of corporations <sup>1</sup> .....	\$323,037	\$227,345	\$44,540	\$34,315	\$11,500	\$3,640	\$5,000	\$1,697
Other salaried officers and employees <sup>2</sup> .....	\$493,330	\$299,723	\$31,002	\$117,444	\$10,464	\$9,100	\$20,443	\$5,155
Wage earners.....	\$4,046,320	\$2,624,193	\$618,733	\$389,331	\$157,204	\$149,434	\$83,462	\$23,854
Contract work.....	\$20,371	\$3,111	\$13,862	\$3,228	\$170	-----	-----	-----
Supplies.....	\$1,111,884	\$460,007	\$372,994	\$100,168	\$20,422	\$113,764	\$15,030	\$3,943
Fuel.....	\$227,440	\$111,844	\$34,259	\$59,044	\$16,175	\$2,400	\$2,541	\$1,177
Purchased electric energy.....	\$351,519	\$137,905	\$91,378	\$64,377	\$19,435	\$19,653	\$13,447	\$4,534
Expenditures for development (included above in "Principal expenses").....	\$137,000	\$120,000	\$17,000	-----	-----	-----	-----	-----
Value of products.....	\$10,337,014	\$5,394,350	\$2,191,366	\$1,816,481	\$411,217	\$314,228	\$202,001	\$57,371
Machinery and other equipment purchased during the year, total cost.....	\$690,965	\$161,595	\$328,094	\$184,441	-----	\$21,041	\$2,194	\$3,000
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	33,417	14,553	8,550	6,676	1,504	740	1,074	320
Prime movers, total horsepower <sup>4</sup> .....	12,902	6,013	2,065	3,483	280	-----	521	30
Steam engines—								
Number.....	103	120	17	16	-----	-----	-----	1
Horsepower.....	6,820	5,183	865	742	-----	-----	-----	30
Steam turbines—								
Number.....	2	1	-----	-----	1	-----	-----	-----
Horsepower.....	200	50	-----	-----	150	-----	-----	-----
Internal-combustion engines—								
Number.....	99	23	23	43	4	-----	6	-----
Horsepower.....	5,787	730	1,800	2,741	130	-----	336	-----
Water wheels and water turbines—								
Number.....	1	-----	-----	-----	-----	-----	1	-----
Horsepower.....	185	-----	-----	-----	-----	-----	185	-----
Electric motors driven by purchased energy—								
Number.....	554	190	120	124	62	16	33	9
Horsepower.....	20,425	8,540	5,885	3,193	1,224	740	553	290
Electric motors driven by energy generated by enterprises reporting:								
Number.....	26	-----	3	23	-----	-----	-----	-----
Horsepower.....	765	-----	300	465	-----	-----	-----	-----
Electric generators:								
Number.....	2	-----	-----	2	-----	-----	-----	-----
Kilowatts.....	360	-----	-----	360	-----	-----	-----	-----
Fuel and electric energy consumed:								
Fuel—								
Coal—								
Anthracite..... tons, 2,240 pounds.....	292	263	-----	24	-----	5	-----	-----
Bituminous..... tons, 2,000 pounds.....	21,577	14,357	2,825	2,026	1,071	573	-----	220
Coke..... tons, 2,000 pounds.....	5	5	-----	-----	-----	-----	-----	-----
Fuel oils..... gallons.....	393,807	73,761	39,682	46,251	204,335	8,906	10,872	-----
Gasoline and kerosene..... gallons.....	469,558	61,066	85,631	232,844	15,189	50,153	10,820	-----
Gas, manufactured..... M cubic feet.....	4,833	-----	-----	4,833	-----	-----	-----	-----
Electric energy—								
Purchased..... kw.-hours.....	13,716,792	5,663,426	3,401,466	2,369,250	861,792	753,543	550,491	126,819
Generated by enterprises reporting..... kw.-hours.....	302,258	-----	-----	302,258	-----	-----	-----	-----

<sup>1</sup> Fuller's and filtering earths, 1 enterprise; sandstone, 2; silica, 2.<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>4</sup> Includes 182 horsepower for inactive prime movers.

# MICHIGAN

On the basis of the industries canvassed for 1929, Michigan ranked seventh among the States both in value of mineral products and number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 15.5 per cent less in 1929 than in 1919. This decrease is accounted for principally in the iron-ore and copper-mining industries, for which comparative figures are given in Table 2.

The corporation was the dominant form of organization among enterprises in the mining industries in Michigan in 1929. As shown in Table 3, corporations operated 85.4 per cent of all enterprises, employed 99.2 per cent of the wage earners, and produced 98.9 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in Michigan, 68.4 per cent were in classes having not more than 100 wage earners. These enterprises employed only 13.8 per cent of the total number of wage earners and contributed 16.7 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 5, show that the 48-hour week predominated, while the "54 and over but

under 63" class ranked second. In the iron-ore industry 82.4 per cent of the wage earners were in the 48-hour-week class, and in the copper industry the majority of the wage earners were included in the same class. In several of the other industries the longer working week predominated.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 8 enterprises in the "10,000 or more" horsepower group reported 164,429 horsepower, or 41.6 per cent, while all enterprises reporting 1,000 or more accounted for 361,387 horsepower, or 91.3 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The iron-ore industry ranked first in the State, accounting for 45.3 per cent of the total value of products. This industry, together with the copper industry, produced 76.5 per cent of the total. Michigan ranked second among the States in 1929 in the iron-ore industry and fourth in the copper industry, accounting for 21.9 per cent and 10.5 per cent, respectively, of the totals for these industries in the United States.

The value of products of the copper-mining industry is for the most part an estimate of the sales value of the ores or concentrates, most of which were not sold by the producers but were smelted by them. Smelting operations and the value of the metals—the final product—are reported by the census of manufactures.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919			1929		1919	
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>3</sup> .....	158	96	122	-21.3	Power equipment (total horsepower).....	395,728	355,897	337,882	5.3
Number of mines and quarries.....	191	117	165	-29.1	Principal expenses: <sup>7</sup>				
Persons engaged, total.....	22,287	20,978	33,202	-36.8	Salaries.....	\$3,780,738	\$3,160,441	\$4,311,559	-26.7
Proprietors and firm members.....	24	4	19	(4)	Wages.....	28,806,325	27,229,497	50,408,187	-46.0
Salaried employees.....	1,434	1,229	1,891	-35.0	Contract work.....	79,057	57,846	29,439	98.5
Wage earners (average for the year) <sup>4</sup> .....	20,829	19,745	31,292	-36.9	Supplies and materials.....	15,779,147	14,905,912	15,204,063	-1.6
					Fuel.....	4,428,842	4,098,089	7,455,207	-45.0
					Purchased electric energy.....	2,627,471	2,195,699	989,490	121.9
					Value of products <sup>8</sup> .....	95,261,833	87,819,104	103,870,089	-15.5

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

MINES AND QUARRIES—MICHIGAN

TABLE 2.—SUMMARY FOR IRON-ORE AND COPPER-MINING INDUSTRIES: 1929 AND 1919

	IRON ORE		COPPER		PER CENT OF INCREASE OR DECREASE (—)	
	1929	1919	1929	1919	Iron ore	Copper
Number of enterprises <sup>1</sup> .....	49	65	9	22	( <sup>2</sup> )	( <sup>2</sup> )
Number of mines.....	57	100	18	28	-43.0	-36.0
Wage earners (average for the year) <sup>3</sup> .....	8,894	16,160	7,834	12,235	-45.0	-22.4
Power equipment (total horsepower).....	173,477	142,659	131,593	169,689	21.7	-22.4
Principal expenses: <sup>4</sup>						
Salaries.....	\$1,273,600	\$2,381,225	\$1,230,101	\$1,440,005	-46.3	-14.6
Wages.....	\$13,049,650	\$32,186,404	\$9,888,442	\$14,608,804	-59.5	-32.7
Contract work.....	\$16,305	\$23,680	\$32,962		-30.9	
Supplies and materials.....	\$5,179,069	\$7,845,035	\$4,602,488	\$5,612,077	-34.0	-16.4
Fuel.....	\$767,137	\$2,669,228	\$2,397,922	\$4,146,775	-71.3	-42.2
Purchased electric energy.....	\$1,794,284	\$769,457	\$168,474	\$114,048	133.2	47.7
Value of products, total.....	\$43,194,938	\$60,900,692	\$29,683,859	\$34,476,336	-29.1	-13.9
Ore mined:						
Quantity (tons, 2,240 pounds).....	15,238,400	15,410,494			-1.1	
Value at mine.....	\$12,900,944	\$60,785,440	\$29,683,859	\$34,476,336	-29.3	-13.9
Other products.....	\$233,994	\$121,232			93.0	

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> Per cent not computed where base is less than 100.  
<sup>3</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>4</sup> See GENERAL EXPLANATIONS—Expenses.  
<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	158	191	20,820	\$95,261,833	LIMESTONE, total.....	14	16	1,566	\$11,059,922
Corporations.....	135	166	20,652	94,213,697	Corporations <sup>2</sup> .....	14	16	1,566	11,059,922
Other <sup>1</sup> .....	23	25	177	1,048,236	SAND AND GRAVEL, total.....	67	68	1,022	7,030,380
IRON ORE, total.....	49	57	8,894	43,194,938	Corporations.....	41	51	918	6,280,294
Corporations.....	49	57	8,894	43,194,938	Other <sup>1</sup> .....	16	17	104	769,086
COPPER, total.....	9	18	7,834	29,683,859	GYP SUM, total.....	6	7	244	645,369
Corporations.....	9	18	7,834	29,683,859	Corporations.....	6	7	244	645,369

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

<sup>2</sup> Includes 1 other form of organization.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	158	191	20,820	\$28,809,325	\$95,261,833	COPPER, total.....	9	18	7,834	\$9,888,442	\$29,683,859
Not reported.....	1	1				21 to 50.....	1	1			
1 to 5.....	24	24	97	151,955	766,484	51 to 100.....	1	1	1,074	1,842,610	4,242,161
6 to 20.....	42	49	455	675,323	2,527,014	251 to 500.....	2	5			
21 to 50.....	19	20	614	848,960	4,439,359	501 to 1,000.....	3	5			
51 to 100.....	22	25	1,710	2,485,491	8,173,034	1,001 to 2,500.....	1	2	6,760	8,495,832	25,441,708
101 to 250.....	31	42	5,149	7,446,989	24,666,260	2,501 and over.....	1	4			
251 to 500.....	11	15	8,915	6,442,742	17,367,342	LIMESTONE, total.....	14	16	1,566	2,308,116	11,059,922
501 to 1,000.....	0	0				1 to 5.....	2	2	41	58,068	125,722
1,001 to 2,500.....	1	2	8,889	11,754,859	37,334,360	6 to 20.....	3	4			
2,501 and over.....	1	4				21 to 50.....	3	3	275	327,561	1,309,423
IRON ORE, total.....	49	57	8,894	13,049,650	43,194,938	51 to 100.....	2	3			
21 to 50.....	3	3	114	162,994	1,290,699	101 to 250.....	3	3	1,250	1,022,487	9,624,777
51 to 100.....	14	14	1,156	1,737,691	6,911,085	501 to 1,000.....	1	1			
101 to 250.....	22	29	8,695	6,399,060	18,946,301	SAND AND GRAVEL, total.....	67	68	1,022	1,468,293	7,030,380
251 to 500.....	9	10	3,699	5,749,914	16,946,863	1 to 5.....	16	16	63	101,217	531,846
501 to 1,000.....	1	1				6 to 20.....	30	30	305	494,768	2,146,303
						21 to 50.....	6	6	184	254,148	1,322,815
						51 to 100.....	2	3			
						101 to 250.....	3	7	470	618,164	3,029,416

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

# MINES AND QUARRIES—MICHIGAN

145

**TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929**

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	157	190	20, 816	\$28, 790, 532	\$96, 244, 760	COPPER, total.....	9	18	7, 834	\$9, 838, 442	\$20, 683, 859
Not reported.....	1	1				48.....	6	14	7, 834	9, 838, 442	20, 683, 859
25 and over but under 36.....	1	1	899	1, 249, 708	3, 214, 600	Over 48 but under 54.....	1	1			
40.....	5	5				54 and over but under 63.....	2	3			
44 and over but under 48.....	2	2				LIMESTONE, total.....	14	16	1, 566	2, 308, 116	11, 059, 922
48.....	58	75	15, 187	20, 803, 105	59, 185, 551	40.....	1	1	229	335, 882	989, 373
Over 48 but under 54.....	4	4	696, 992	4, 008, 260		48.....	1	1			
54 and over but under 63.....	71	86	3, 961	5, 693, 795	27, 207, 524	63 and over.....	2	2			
63 and over.....	15	16	259	341, 874	1, 628, 815	54 and over but under 63.....	10	12	1, 337	1, 072, 284	10, 070, 549
IRON ORE, total.....	40	57	8, 894	13, 049, 659	43, 194, 938	SAND AND GRAVEL, total.....	57	68	1, 022	1, 468, 293	7, 030, 380
40.....	3	3	874	1, 216, 840	3, 058, 362	25 and over but under 36.....	1	1	56	87, 021	371, 636
44 and over but under 48.....	2	2				40.....	1	1			
48.....	38	46				48.....	4	4			
Over 48 but under 54.....	1	1	602	1, 051, 104	5, 205, 477	Over 48 but under 54.....	2	2	761	1, 118, 120	5, 300, 984
54 and over but under 63.....	5	5				54 and over but under 63.....	39	49			
						63 and over.....	10	11			

<sup>1</sup> Exclusive of 1 enterprise whose value of product was less than \$20,000.

**TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929**

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—							
		25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	5,000 to 9,999	10,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	156	7	21	31	26	31	23	9	8
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	395, 723	471	3, 454	11, 620	18, 701	52, 878	79, 959	64, 121	164, 420
Prime movers, total horsepower.....	243, 270	230	1, 782	5, 622	8, 175	11, 134	23, 399	33, 917	169, 011
Steam engines—									
Number.....	465	4	10	53	34	44	87	67	166
Horsepower.....	148, 071	230	615	3, 853	4, 077	8, 384	23, 324	21, 045	85, 343
Steam turbines—									
Number.....	34					2	3	7	22
Horsepower.....	74, 116					2, 300	75	5, 972	65, 768
Internal-combustion engines—									
Number.....	119		29	31	49	10			
Horsepower.....	6, 584		1, 167	1, 769	3, 198	450			
Water wheels and water turbines—									
Number.....	14							8	6
Horsepower.....	13, 900							6, 000	7, 900
Horsepower rating of inactive prime movers, included above.....	21, 271		120	176	290	442	910	4, 355	14, 978
Electric motors driven by purchased energy—									
Number.....	2, 885	12	53	163	311	811	943	408	124
Horsepower.....	152, 453	241	1, 072	5, 998	10, 616	41, 744	56, 560	30, 204	5, 418
Electric motors driven by energy generated by enterprises reporting:									
Number.....	1, 691			10	53	143	91	182	1, 212
Horsepower.....	98, 450			300	1, 539	3, 901	1, 872	9, 910	81, 228
Electric generators:									
Number.....	66		2	1	6	12	4	9	32
Kilowatts.....	66, 853		8	240	760	2, 865	960	7, 700	54, 360

<sup>1</sup> No power equipment was reported by 2 enterprises.

**TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929**  
[The month of maximum employment 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 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, total.....	20, 829	<b>18, 870</b>	<b>19, 218</b>	19, 904	20, 747	21, 288	21, 700	21, 707	21, 899	21, 933	21, 889	21, 020	19, 774	86. 0
Iron ore.....	8, 894	<b>8, 448</b>	8, 574	8, 667	<b>8, 898</b>	8, 879	9, 037	9, 066	9, 186	9, 228	9, 079	8, 864	8, 801	91. 5
Copper.....	7, 834	<b>7, 435</b>	7, 510	7, 709	7, 746	7, 737	7, 747	7, 789	7, 909	7, 987	8, 190	8, 169	8, 033	91. 4
Limestone.....	1, 566	<b>1, 052</b>	1, 116	1, 248	1, 577	1, 805	1, 913	1, 919	1, 850	1, 781	1, 766	1, 684	1, 076	54. 8
Sand and gravel.....	1, 022	382	429	685	1, 253	1, 378	1, 455	1, 461	1, 417	1, 358	1, 281	835	326	22. 3
Gypsum.....	244	194	<b>161</b>	184	228	272	281	283	312	291	284	236	187	51. 6
Sand, molding.....	62	17	20	38	39	64	100	83	86	104	91	71	28	16. 3
Clay.....	56	49	42	40	58	62	66	65	63	59	62	61	46	60. 6
Other industries.....	1, 151	1, 245	<b>1, 366</b>	1, 333	<b>988</b>	1, 091	1, 101	1, 041	1, 076	1, 125	1, 136	1, 100	1, 277	68. 7

## MINES AND QUARRIES—MICHIGAN

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Two of the "Other industries," however, were of greater importance in the State than some of the industries shown separately]

	Total	Iron ore	Copper <sup>1</sup>	Limestone <sup>2</sup>	Sand and gravel	Gypsum	Sand, molding	Clay	Other industries <sup>3</sup>
Number of enterprises <sup>4</sup> .....	158	49	9	14	57	6	5	4	14
Number of mines and quarries.....	101	57	18	16	68	7	6	4	15
Persons engaged in industry, total (all classes).....	22,287	9,407	8,313	1,706	1,222	265	87	57	1,230
Proprietors and firm members.....	24	—	—	2	19	—	1	—	2
Principal salaried officers of corporations <sup>5</sup> .....	104	4	19	14	57	1	—	—	7
Other salaried officers and employees <sup>6</sup> .....	1,330	509	460	124	124	20	22	1	70
Wage earners (average for the year).....	20,829	8,894	7,834	1,566	1,022	244	62	56	1,161
Principal expenses:									
Salaries and wages—									
Principal officers of corporations <sup>5</sup> .....	\$642,478	\$23,200	\$148,278	\$114,278	\$276,222	\$6,000	\$34,000	—	\$40,500
Other salaried officers and employees <sup>6</sup> .....	\$3,138,260	\$1,255,400	\$1,081,823	\$303,783	\$249,462	\$38,888	\$60,613	\$3,360	\$144,031
Wage earners.....	\$28,808,325	\$13,040,659	\$9,838,442	\$2,308,116	\$1,468,293	\$312,464	\$108,535	\$65,861	\$1,054,955
Contract work.....	\$79,057	\$16,305	\$32,962	—	\$21,211	—	—	—	\$8,579
Supplies.....	\$15,779,147	\$5,170,069	\$4,692,488	\$4,397,526	\$774,570	\$49,241	\$38,065	\$27,957	\$619,631
Fuel.....	\$4,428,842	\$767,137	\$2,397,022	\$738,083	\$318,199	\$53,420	\$12,554	\$13,110	\$127,617
Purchased electric energy.....	\$2,627,471	\$1,794,284	\$168,474	\$116,500	\$408,073	\$51,588	\$23,699	—	\$64,853
Expenditures for development (included above in "Principal expenses").....	\$5,039,000	\$2,399,000	\$2,413,000	\$160,000	—	\$62,000	—	\$3,000	\$2,000
Value of products.....	\$95,261,833	\$43,194,038	\$29,083,859	\$11,059,922	\$7,030,380	\$645,399	\$412,349	\$138,583	\$3,096,403
Machinery and other equipment purchased during the year, total cost.....	\$3,244,270	\$604,630	\$713,620	\$1,002,187	\$450,881	\$332,633	\$112,599	—	\$27,820
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	395,723	173,477	131,593	34,982	37,633	6,284	2,193	275	9,280
Prime movers, total horsepower <sup>4</sup> .....	243,270	75,203	122,227	22,420	16,318	1,614	875	275	4,338
Steam engines—									
Number.....	465	134	163	57	78	7	1	2	23
Horsepower.....	148,071	39,468	85,237	6,659	12,132	1,119	100	275	3,681
Steam turbines—									
Number.....	34	11	18	5	—	—	—	—	—
Horsepower.....	74,115	21,825	36,990	15,300	—	—	—	—	—
Internal-combustion engines—									
Number.....	119	2	—	12	72	5	11	—	17
Horsepower.....	6,584	10	—	461	4,186	495	775	—	657
Water wheels and water turbines—									
Number.....	14	14	—	—	—	—	—	—	—
Horsepower.....	13,900	13,900	—	—	—	—	—	—	—
Electric motors driven by purchased energy—									
Number.....	2,885	1,573	227	233	522	145	43	—	142
Horsepower.....	152,453	98,274	9,366	12,562	21,315	4,070	1,318	—	4,948
Electric motors driven by energy generated by enterprises reporting:									
Number.....	1,691	429	908	233	19	5	—	—	97
Horsepower.....	98,450	27,294	52,795	14,720	550	61	—	—	3,030
Electric generators: <sup>7</sup>									
Number.....	66	18	26	6	3	1	—	—	12
Kilowatts.....	66,883	24,325	28,500	11,625	400	50	—	—	1,923
Fuel and electric energy consumed:									
Fuel—									
Coal—									
Anthracite..... tons, 2,240 pounds.....	845	200	—	—	635	—	—	—	10
Bituminous..... tons, 2,000 pounds.....	1,002,107	152,055	559,783	192,403	42,264	9,056	546	2,629	43,371
Coke..... tons, 2,000 pounds.....	2,004	101	2,366	—	46	301	—	—	—
Fuel oils..... gallons.....	1,040,880	61,802	170,945	34,000	768,026	—	405	—	5,202
Gasoline and kerosene..... gallons.....	779,500	84,181	75,743	91,378	373,286	48,725	66,993	4,302	34,892
Electric energy—									
Purchased..... kw.-hours.....	174,003,915	125,198,225	11,341,254	9,629,100	21,060,994	2,462,429	985,028	—	3,326,795
Generated by enterprises reporting..... kw.-hours.....	222,403,092	61,004,223	132,274,897	25,573,960	271,920	—	—	—	3,278,092

<sup>1</sup> Includes 1 mill for which separate report was received.

<sup>2</sup> Data for several limestone enterprises not included. See "Stone" report, Table 4, p. 332.

<sup>3</sup> Abrasive materials, 1 enterprise; basalt, 2; coal, bituminous, 7; granite, 1; marble, 1; sand, glass, 1; stone, miscellaneous, 1.

<sup>4</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> Includes 21,271 horsepower for inactive prime movers.

<sup>7</sup> Includes 8,613 kilowatts for inactive generators.

# MINNESOTA

On the basis of the industries canvassed for 1929, Minnesota ranked fourth among the States in value of mineral products and sixteenth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the 1929 figures to exclude data for the sand and gravel industry, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, differed less than one-tenth of 1 per cent for the two years. Due to changes in the price level, the value of products of the principal industry (iron ore) decreased from \$128,377,174 in 1919 to \$125,333,930 in 1929, despite the increase in the quantity of production from 36,258,483 tons to 46,815,208 tons. (Data for the production of manganiferous ore are included in the figures for the iron-ore industry for 1929, and this is substantially true also for 1919.) Comparative figures for the iron-ore industry are given in Table 2. The combined increase in value of products for the granite and limestone industries almost equaled the decline in the iron-ore industry.

The corporation was the dominant form of organization among enterprises in the mining industries in Minnesota in 1929. As shown in Table 3, corporations operated 87 per cent of all enterprises, employed 98.4 per cent of the wage earners, and produced 99.5 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage

earners employed. Of the total number of enterprises in Minnesota, 74 per cent were in classes having not more than 100 wage earners. These enterprises employed only 25.4 per cent of the total number of wage earners and contributed 23.5 per cent of the total value of products.

The statistics for the number of hours in the working week for wage earners, given in Table 5, show that the "54 and over but under 63" class predominated, while the 48-hour week ranked second. In the iron-ore industry 53.6 per cent of the wage earners were employed 54 hours and over per week, while 42.3 per cent were in the 48-hour-week class.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 4 enterprises in the "10,000 to 24,999" horsepower group reported 44,074 horsepower, or 21.1 per cent, while all enterprises reporting 1,000 or more accounted for 180,947 horsepower, or 86.7 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The iron-ore industry ranked first in the State, accounting for 94.7 per cent of the total value of products. This industry, together with the granite and the sand and gravel industries, produced 98.9 per cent of the total. Minnesota ranked first among the States in 1929 in the iron-ore industry, accounting for 63.5 per cent of the total value of products for this industry in the United States.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919			1929		1919	
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>3</sup> .....	146	121	135	-10.4	Principal expenses: <sup>7</sup>				
Number of mines and quarries.....	172	143	190	-27.0	Salaries.....	\$3,225,780	\$2,912,442	\$3,048,421	-4.5
Persons engaged, total.....	12,918	12,533	18,562	-32.2	Wages.....	18,180,803	17,766,522	20,353,021	-39.5
Proprietors and firm members.....	27	22	40	( <sup>4</sup> )	Contract work.....	1,480,269	1,476,441	1,512,959	-2.4
Salaried employees.....	<sup>5</sup> 1,278	<sup>5</sup> 1,191	1,257	-5.3	Supplies and materials.....	9,464,474	9,249,071	14,101,962	-34.4
Wage earners (average for the year) <sup>6</sup> .....	11,613	11,370	17,265	-34.1	Fuel.....	2,785,705	2,725,530	4,155,158	-34.4
Power equipment (total horsepower).....	208,741	198,182	144,199	37.4	Purchased electric energy.....	1,878,823	1,774,121	520,794	236.8
					Value of products <sup>8</sup> .....	132,400,530	130,359,063	130,390,254	( <sup>9</sup> )

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

<sup>9</sup> Less than one-tenth of 1 per cent decrease.

MINES AND QUARRIES—MINNESOTA

TABLE 2.—SUMMARY FOR IRON-ORE-MINING INDUSTRY: 1929 AND 1919

	1929	1919	Per cent of increase or decrease (—)		1929	1919	Per cent of increase or decrease (—)
Number of enterprises <sup>1</sup> .....	75	89	(?)	Principal expenses—Continued.			
Number of mines.....	85	141	—59.7	Fuel.....	\$2,661,024	\$4,050,293	—34.4
Wage earners (average for the year) <sup>2</sup> .....	10,078	16,236	—37.9	Purchased electric energy.....	\$1,632,650	\$465,323	230.6
Power equipment (total horsepower).....	184,042	135,924	35.4	Value of products, total.....	\$125,333,930	\$128,377,174	—2.4
Principal expenses: <sup>4</sup>				Ore mined:			
Salaries.....	\$2,507,297	\$2,950,807	—15.0	Quantity (tons 2,240 pounds).....	46,815,208	36,258,433	29.1
Wages.....	\$18,038,428	\$28,333,475	—43.4	Value at mine.....	\$124,725,908	\$128,333,021	—2.8
Contract work.....	\$1,473,841	\$1,444,250	2.0	Other products.....	\$608,022	\$44,163	1,277.1
Supplies and materials.....	\$3,563,830	\$13,870,897	—38.2				

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> Per cent not computed where base is less than 100.  
<sup>3</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>4</sup> See GENERAL EXPLANATIONS—Expenses.  
<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	146	172	11,613	\$132,400,530	SAND AND GRAVEL, total.....	25	29	243	\$2,041,467
Corporations.....	127	152	11,426	131,730,779	Corporations <sup>2</sup> .....	25	29	243	2,041,467
Other <sup>1</sup> .....	19	20	187	663,751	LIMESTONE, total.....	10	10	233	815,027
IRON ORE, total.....	75	85	10,078	125,333,930	Corporations.....	7	7	163	594,125
Corporations.....	75	85	10,078	125,333,930	Other <sup>1</sup> .....	3	3	70	220,902
GRANITE, total.....	25	37	923	3,617,633					
Corporations.....	14	25	835	3,295,438					
Other <sup>1</sup> .....	11	12	88	322,195					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.      <sup>2</sup> Includes 2 other forms of organization.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	146	172	11,613	\$18,180,303	\$132,400,530	SAND AND GRAVEL, total.....	25	29	243	\$418,781	\$2,041,467
1 to 5.....	22	22	77	103,145	486,932	1 to 5.....	11	11	42	60,030	384,799
6 to 20.....	30	38	393	558,036	2,791,343	6 to 20.....	10	11	92	154,030	630,011
21 to 50.....	29	42	998	1,561,482	13,314,843	21 to 50.....	4	7	109	199,721	1,020,657
51 to 100.....	21	23	1,486	2,378,183	14,504,802	LIMESTONE, total.....	10	10	233	819,087	815,027
101 to 250.....	29	30	8,659	13,579,507	101,302,610	1 to 5.....	3	3	12	13,314	24,383
251 to 500.....	5	6				6 to 20.....	3	3	46	67,353	243,188
501 to 1,000.....	4	5				21 to 50.....	3	3	175	238,420	547,456
						51 to 100.....	1	1			
IRON ORE, total.....	75	85	10,078	10,038,428	125,333,930	OTHER STONES, total.....	8	8	107	148,476	509,757
6 to 20.....	5	5	50	66,052	797,596	1 to 5.....	2	2			
21 to 50.....	15	17	534	865,238	10,996,578	6 to 20.....	5	5	107	148,476	509,757
51 to 100.....	19	19	1,336	2,197,833	14,051,413	21 to 50.....	1	1			
101 to 250.....	23	35	8,158	12,939,305	99,488,343						
251 to 500.....	4	4									
501 to 1,000.....	4	5									
GRANITE, total.....	25	37	923	1,230,308	3,617,633						
1 to 5.....	0	6	20	25,851	67,811						
6 to 20.....	10	11	106	143,014	718,014						
21 to 50.....	0	14	224	332,899	858,099						
51 to 100.....	1	3									
101 to 250.....	1	1	573	728,634	1,973,709						
251 to 500.....	1	2									

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.      <sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

MINES AND QUARRIES—MINNESOTA

TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup>	144	170	11,610	\$18,176,353	\$132,390,591	GRANITE, total	25	37	923	\$1,230,398	\$3,017,033
25 and over but under 36	1	1	522	850,813	2,801,523	44 and over but under 48	5	7	82	125,488	434,623
44 and over but under 48	10	12	5,148	7,946,401	27,243,349	48	19	29	841	1,104,910	3,183,010
48	51	62	136	198,815	437,855	54 and over but under 63	1	1			
Over 48 but under 54	4	4	5,216	8,177,300	90,956,548	SAND AND GRAVEL, total	25	29	243	413,781	2,041,467
54 and over but under 63	72	82	593	1,002,964	4,951,316	48	1	1	13	13,274	60,402
63 and over	6	9				Over 48 but under 54	2	2	230	400,507	1,081,005
IRON ORE, total	75	85	10,078	16,038,428	125,833,030	54 and over but under 63	18	22			
44 and over but under 48	3	3	413	697,208	2,288,231	63 and over	4	4			
48	28	29	4,267	6,802,282	23,988,001	LIMESTONE, total	10	10	233	319,087	815,027
54 and over but under 63	42	48	5,398	8,538,938	99,062,698	25 and over but under 36	1	1	102	228,625	450,754
63 and over	2	5				48	2	2	71	90,402	355,273
						Over 48 but under 54	2	2			
						54 and over but under 63	5	5			

<sup>1</sup> Exclusive of 2 enterprises whose value of product was less than \$20,000.

TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—							
		Less than 100	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	5,000 to 9,999	10,000 to 24,999
Number of enterprises reporting power equipment <sup>1</sup>	143	20	23	25	19	32	15	5	4
Prime movers and electric motors driven by purchased energy, aggregate horsepower	208,741	963	3,807	8,495	14,529	49,130	52,975	34,768	44,074
Prime movers, total horsepower	110,805	518	1,802	1,661	3,860	16,500	29,998	25,111	31,560
Steam engines—									
Number	617	13	27	26	35	104	145	92	175
Horsepower	104,776	347	1,245	1,048	3,200	15,695	28,800	23,111	31,330
Steam turbines—									
Number	21		3	1			18	1	
Horsepower	2,407		250	125			32	2,000	
Internal-combustion engines—									
Number	66	6	11	13	9	10	11		6
Horsepower	3,287	171	307	488	460	470	1,161		230
Water wheels and water turbines—									
Number	3					3			
Horsepower	335					335			
Horsepower rating of inactive prime movers, included above	10,648		175			283	2,670	3,405	4,025
Electric motors driven by purchased energy—									
Number	2,949	34	71	214	393	1,090	565	216	376
Horsepower	97,936	445	2,005	6,334	10,869	32,630	22,982	9,657	12,514
Electric motors driven by energy generated by enterprises reporting:									
Number	329		13	9		214	53		35
Horsepower	3,804		104	210		699	2,381		400
Electric generators:									
Number	12		1	2		2	4	2	1
Kilowatts	4,215		90	130		325	770	2,700	200

<sup>1</sup> No power equipment was reported by 3 enterprises.

TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total	11,613	<b>8,798</b>	<i>9,077</i>	9,612	11,555	13,115	13,483	13,449	13,341	13,044	12,524	11,342	10,023	65.3
Iron ore	10,078	<b>7,619</b>	<i>7,863</i>	8,295	9,980	11,397	11,713	11,674	11,606	11,357	10,887	9,831	8,694	65.0
Granite	923	<b>367</b>	<i>364</i>	381	934	950	960	950	948	953	939	930	912	39.3
Sand and gravel	243	<b>35</b>	<i>92</i>	135	262	329	362	378	339	324	312	208	94	22.5
Limestone	233	<b>154</b>	<i>153</i>	217	238	274	274	274	273	243	243	236	207	55.8
Other stones	107	<b>63</b>	<i>65</i>	68	103	132	139	139	140	128	111	106	93	45.0
Other industries	29	<b>20</b>	<i>20</i>	16	32	33	35	34	35	34	32	31	23	45.7

## MINES AND QUARRIES—MINNESOTA

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises]

	Total	Iron ore	Granite	Sand and gravel	Limestone	Other stones <sup>1</sup>	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	146	75	25	25	10	8	3
Number of mines and quarries.....	172	85	37	29	10	8	3
Persons engaged in industry, total (all classes).....	12,918	11,182	1,019	335	268	126	93
Proprietors and firm members.....	27	12	12	5	5	4	1
Principal salaried officers of corporations <sup>3</sup> .....	69	4	24	29	7	3	2
Other salaried officers and employees <sup>4</sup> .....	1,209	1,050	60	58	23	12	6
Wage earners (average for the year).....	11,613	10,078	923	243	233	107	29
Principal expenses:							
Salaries and wages—							
Principal officers of corporations <sup>4</sup> .....	\$342,407	\$14,500	\$101,662	\$166,263	\$42,542	\$13,500	\$4,000
Other salaried officers and employees <sup>4</sup> .....	\$2,883,313	\$2,492,797	\$157,808	\$147,075	\$43,557	\$33,094	\$3,382
Wage earners.....	\$18,180,303	\$10,038,423	\$1,230,398	\$413,781	\$319,087	\$148,476	\$80,133
Contract work.....	\$1,430,266	\$1,473,841	\$2,600	\$3,815			
Supplies.....	\$9,464,474	\$8,568,530	\$623,639	\$205,403	\$91,365	\$64,833	\$1,406
Fuel.....	\$2,785,705	\$2,661,024	\$31,073	\$90,175	\$27,332	\$4,733	\$1,398
Purchased electric energy.....	\$1,875,823	\$1,532,550	\$153,663	\$99,702	\$45,253	\$39,655	\$3,000
Expenditures for development (included above in "Principal expenses").....	\$5,390,000	\$5,276,000	\$86,000		\$10,000		\$18,000
Value of products.....	\$132,400,530	\$125,333,930	\$8,617,633	\$2,041,467	\$815,027	\$509,757	\$82,716
Machinery and other equipment purchased during the year, total cost.....	\$2,610,345	\$2,281,704	\$15,937	\$282,571	\$4,112	\$14,801	\$12,000
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	208,741	184,042	6,615	10,559	2,959	3,641	925
Prime movers, total horsepower <sup>5</sup> .....	110,805	104,669	1,082	3,618	886	225	375
Steam engines—							
Number.....	617	546	13	38	15	5	
Horsepower.....	104,776	101,031	422	2,753	470	100	
Steam turbines—							
Number.....	21	17	2		1	1	
Horsepower.....	2,407	2,032	180		120	125	
Internal-combustion engines—							
Number.....	66	20	4	26	10		6
Horsepower.....	3,287	1,606	145	805	296		375
Water wheels and water turbines—							
Number.....	3		3				
Horsepower.....	385		336				
Electric motors driven by purchased energy—							
Number.....	2,949	2,106	431	220	98	80	8
Horsepower.....	97,936	79,373	5,583	6,941	2,073	3,416	550
Electric motors driven by energy generated by enterprises reporting:							
Number.....	329	151	175	3			
Horsepower.....	3,804	3,694	150	60			
Electric generators: <sup>6</sup>							
Number.....	12	10	1	1			
Kilowatts.....	4,215	3,960	200	55			
Fuel and electric energy consumed:							
Fuel—							
Coal—							
Anthracite..... tons, 2,240 pounds.....	115	100	6	0			
Bituminous..... tons, 2,000 pounds.....	469,807	452,843	4,556	8,067	4,086	715	40
Coke..... tons, 2,000 pounds.....	23,280	23,277			3		
Fuel oils..... gallons.....	464,650	429,883	11,855	15,248	670		8,000
Gasoline and kerosene..... gallons.....	436,100	338,264	302	57,599	32,580	3,461	2,900
Electric energy—							
Purchased..... kw.-hours.....	107,435,531	90,080,241	8,037,946	4,885,750	1,946,609	2,324,985	160,000
Generated by enterprises reporting..... kw.-hours.....	4,420,538	4,365,538		55,000			

<sup>1</sup> Basalt, 2 enterprises; marble, 1; sandstone, 3; stone, miscellaneous, 2.<sup>2</sup> Abrasive materials, 2 enterprises; feldspar, 1.<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" office.<sup>5</sup> Includes 10,648 horsepower for inactive prime movers.<sup>6</sup> Includes 220 kilowatts for inactive generators.

# MISSOURI

On the basis of the industries canvassed for 1929, Missouri ranked fourteenth among the States in value of mineral products and thirteenth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 30.3 per cent greater in 1929 than in 1919.

Table 2 gives comparative statistics for the two years for the leading industries—lead and zinc (combined), and bituminous coal. The value of products of the limestone industry increased from \$2,355,736 in 1919 to \$6,175,012 in 1929. The figures for 1929 include, however, \$2,055,142 for limestone quarried by lime and cement manufacturers, while for 1919 similar data were not included.

Statistics for nonproducing (development only) enterprises are given in Table 3, and are not included in any of the other tables shown.

The corporate form of organization was most important among enterprises in the mining industries in Missouri in 1929. As shown in Table 4, corporations operated 47.5 per cent of all enterprises, employed 85.5 per cent of the wage earners, and produced 91.6 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 5 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises employing wage earners in Missouri, 85.5 per cent were in classes having not more than 50 wage earners. These enterprises employed only 33.4 per cent of the total number of wage earners and contributed 26.8 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 6, show that the 48-hour week predominated, while the "54 and over but under 63" class ranked second. In the bituminous-coal industry 40.6 per cent of the wage earners were in the 48-hour class, and in the lead-mining industry practically all of the wage earners were in the same class. In several of the other industries the longer working week predominated.

Table 7 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 4 enterprises in the "10,000 or more" horsepower group reported 75,355 horsepower, or 46.5 per cent. This group, together with 500-999 and 1,000-2,499 horsepower groups, accounted for 76.4 per cent of the aggregate.

The statistics for wage earners presented in Table 8, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 9 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The lead-mining industry ranked first in the State, accounting for 48.6 per cent of the total value of products. This industry, together with the bituminous-coal and the limestone industries, produced 82.1 per cent of the total. Missouri ranked first among the States in 1929 in the lead-mining industry, accounting for 34 per cent of the total value of products for this industry in the United States.

The value of products of the metal-mining industries is not the value of the metals produced or recoverable but is, for the most part, an estimate of the sales value of the ores or concentrates—in other words, the mine and mill products—most of which were not sold by the producers but were smelted, or smelted and refined, by them. The smelting and refining operations and the value of the metals—the final products—are reported by the census of manufactures.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (—)	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (—)
	1929		1919			1929		1919		
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>			
Number of enterprises <sup>3</sup> .....	408	373	408	—20.3						
Number of mines and quarries.....	439	401	494	—18.8						
Persons engaged, total.....	14,689	13,952	16,858	—14.7						
Proprietors and firm members.....	241	237	497	—52.3						
Salaried employees.....	1,030	922	1,004	—8.2						
Wage earners (average for the year) <sup>4</sup> .....	13,418	12,703	14,857	—13.9						
Power equipment (total horsepower).....	165,368	147,986	100,070	47.9						
Principal expenses: <sup>5</sup>										
Salaries.....	\$2,320,358	\$2,004,380	\$1,863,624	12.4						
Wages.....	10,826,062	15,537,816	16,777,353	—7.4						
Contract work.....	136,808	136,082	415,843	—67.3						
Supplies and materials.....	5,836,202	5,308,599	4,784,748	12.2						
Fuel.....	843,371	677,556	1,743,747	—61.1						
Purchased electric energy.....	2,415,781	2,322,348	290,606	690.0						
Value of products <sup>7</sup> .....	47,276,257	43,479,216	33,365,694	30.3						

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

## MINES AND QUARRIES—MISSOURI

TABLE 2.—SUMMARY FOR LEAD AND ZINC MINING AND FOR BITUMINOUS-COAL INDUSTRIES: 1929 AND 1919

	LEAD AND ZINC		COAL, BITUMINOUS		PER CENT OF INCREASE OR DECREASE (-)	
	1929	1919	1929	1919	Lead and zinc	Coal, bituminous
Number of enterprises <sup>1</sup> .....	24	93	186	179	(2)	3.9
Number of mines.....	29	96	190	196	(3)	-3.1
Wage earners (average for the year) <sup>2</sup> .....	4,039	4,793	4,657	7,285	-15.7	-35.1
Power equipment (total horsepower).....	84,888	56,998	34,812	28,355	48.9	22.6
Principal expenses: <sup>4</sup>						
Salaries.....	\$1,013,248	\$679,907	\$481,235	\$777,903	49.0	-38.1
Wages.....	\$6,232,834	\$5,955,929	\$5,150,437	\$3,153,952	4.6	-36.9
Contract work.....	\$55,513	\$65,798	\$22,216	\$309,081	-15.8	-92.7
Supplies and materials.....	\$2,090,532	\$2,568,293	\$1,145,658	\$1,381,223	5.0	-17.1
Fuel.....	\$325,461	\$1,106,807	\$136,956	\$427,842	-70.8	-08.0
Purchased electric energy.....	\$1,742,024	\$98,416	\$241,816	\$70,897	1070.7	241.1
Value of products <sup>5</sup> .....	\$23,593,448	\$15,879,177	\$9,687,708	\$12,077,845	48.6	-20.0
Quantity (tons, 2,000 pounds).....			3,053,458	3,783,714		4.8

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>2</sup> Per cent not computed where base is less than 100.<sup>3</sup> See GENERAL EXPLANATIONS—Persons Engaged.<sup>4</sup> See GENERAL EXPLANATIONS—Expenses.<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.<sup>6</sup> See GENERAL EXPLANATIONS—Value of Products.

TABLE 3.—SUMMARY FOR NONPRODUCING ENTERPRISES: 1929

Number of enterprises.....	8	Principal expenses—Continued.	
Number of mines.....	8	Contract work.....	\$30,204
Wage earners (average for the year).....	21	Supplies, fuel, and purchased electric energy.....	17,050
Power equipment (total horsepower).....	1,053	Expenditures for development (Includes "Principal expenses" listed above in addition to other expenditures, not called for).....	83,908
Principal expenses:			
Salaries.....	\$5,932		
Wages.....	13,876		

TABLE 4.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	408	430	13,418	\$47,276,257	CLAY, total.....	21	29	314	\$916,532
Corporations.....	194	214	11,470	43,311,957	Corporations.....	10	10	180	393,338
Other <sup>1</sup> .....	214	225	1,948	3,964,300	Other <sup>1</sup> .....	11	19	134	523,144
LEAD, total.....	13	15	3,773	22,955,417	BARITE, total.....	30	31	545	835,778
Corporations.....	0	11	3,764	22,937,482	Corporations.....	8	8	402	632,308
Other <sup>1</sup> .....	4	4	9	17,935	Other <sup>1</sup> .....	22	23	143	203,470
COAL, BITUMINOUS, total.....	186	190	4,657	9,667,708	MARBLE, total.....	6	8	299	752,978
Corporations.....	64	67	3,738	8,077,905	Corporations <sup>2</sup> .....	6	8	299	752,978
Other <sup>1</sup> .....	122	123	919	1,589,803	ZINC, total.....	11	14	266	638,031
LIMESTONE, total.....	73	79	2,350	6,175,012	Corporations <sup>3</sup> .....	11	14	266	638,031
Corporations.....	47	53	1,908	5,277,907	STONE, MISCELLANEOUS, total.....	19	19	267	628,763
Other <sup>1</sup> .....	26	26	442	897,045	Corporations.....	5	5	78	312,371
SAND AND GRAVEL, total.....	32	35	566	3,516,756	Other <sup>1</sup> .....	14	14	189	316,392
Corporations.....	26	28	507	3,234,581					
Other <sup>1</sup> .....	6	7	59	282,175					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.<sup>2</sup> Includes 1 other form of organization.<sup>3</sup> Includes 2 other forms of organization.

# MINES AND QUARRIES—MISSOURI

153

**TABLE 5.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929**

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
<b>ALL INDUSTRIES, total<sup>3</sup></b>	<b>406</b>	<b>437</b>	<b>13,418</b>	<b>\$16,326,962</b>	<b>\$47,267,557</b>	<b>SAND AND GRAVEL, total</b>	<b>32</b>	<b>35</b>	<b>566</b>	<b>\$729,340</b>	<b>\$3,516,756</b>
Not reported.....	2	3	399	386,151	939,387	1 to 5.....	6	7	21	27,390	168,147
1 to 5.....	122	124	1,700	1,780,279	4,704,604	6 to 20.....	16	17	184	243,892	1,310,745
6 to 20.....	149	159	2,372	2,679,264	7,032,063	21 to 50.....	9	10	361	458,058	2,028,864
21 to 50.....	74	78	2,558	2,669,298	6,155,339	51 to 100.....	1	1			
51 to 100.....	39	41	2,182	2,570,373	5,618,008	<b>BARITE, total</b>	<b>30</b>	<b>31</b>	<b>545</b>	<b>375,217</b>	<b>835,778</b>
101 to 250.....	14	22				Not reported.....	2	3	42	38,914	69,684
251 to 500.....	2	2				1 to 5.....	13	13	101	88,989	132,673
501 to 1,000.....	3	5	4,198	6,205,597	22,818,156	6 to 20.....	11	11			
1,001 to 2,500.....	1	3				21 to 50.....	2	2	402	247,314	633,521
						51 to 100.....	1	1			
						251 to 500.....	1	1			
<b>COAL, BITUMINOUS, total</b>	<b>186</b>	<b>190</b>	<b>4,657</b>	<b>5,150,487</b>	<b>9,607,708</b>	<b>CLAY, total</b>	<b>21</b>	<b>29</b>	<b>314</b>	<b>820,512</b>	<b>910,532</b>
1 to 5.....	72	72	222	206,511	395,804	1 to 5.....	3	4	11	8,000	26,330
6 to 20.....	55	55	596	612,003	1,082,275	6 to 20.....	13	20	130	122,386	356,892
21 to 50.....	29	30	949	1,080,298	2,234,647	21 to 50.....	5	5	173	189,526	532,810
51 to 100.....	26	27	1,749	1,965,731	4,220,554	<b>MARBLE, total</b>	<b>0</b>	<b>8</b>	<b>299</b>	<b>335,909</b>	<b>752,978</b>
101 to 250.....	3	3	1,141	1,285,944	1,734,428	6 to 20.....	2	2			
251 to 500.....	1	1				21 to 50.....	2	2			
501 to 1,000.....	2	2				51 to 100.....	1	1	299	335,909	752,978
1,001 to 2,500.....	1	3				101 to 250.....	1	3			
<b>LEAD, total<sup>3</sup></b>	<b>11</b>	<b>13</b>	<b>3,773</b>	<b>5,909,659</b>	<b>22,946,717</b>	<b>STONE, MISCELLANEOUS, total</b>	<b>19</b>	<b>19</b>	<b>267</b>	<b>286,938</b>	<b>628,763</b>
1 to 5.....	2	2				1 to 5.....	6	6	22	23,310	73,023
6 to 20.....	2	2				6 to 20.....	9	9	110	122,698	366,999
21 to 50.....	1	1	3,773	5,909,659	22,946,717	21 to 50.....	4	4	135	140,930	188,741
51 to 100.....	2	2				<b>ZINC, total</b>	<b>11</b>	<b>14</b>	<b>266</b>	<b>323,175</b>	<b>638,031</b>
101 to 250.....	1	1				1 to 5.....	5	5	18	20,328	40,199
251 to 500.....	2	2				6 to 20.....	4	4			
501 to 1,000.....	2	2				21 to 50.....	1	1	248	302,847	597,832
1,001 to 2,500.....	1	3				101 to 250.....	1	4			
<b>LIMESTONE, total</b>	<b>73</b>	<b>79</b>	<b>2,350</b>	<b>2,433,447</b>	<b>6,175,012</b>						
1 to 5.....	11	11	44	42,860	128,051						
6 to 20.....	28	29	388	375,219	957,526						
21 to 50.....	10	20	687	674,664	1,702,185						
51 to 100.....	9	10	561	490,606	1,268,915						
101 to 250.....	6	9	770	841,098	2,118,335						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>3</sup> Exclusive of 2 enterprises employing no wage earners.

**TABLE 6.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Missouri was 131, distributed as follows: Coal, bituminous, 114; granite, 1; lead, 4; limestone, 5; stone, miscellaneous, 3; zinc, 4. The combined value of products represented by these enterprises was \$1,003,479]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
<b>ALL INDUSTRIES, total<sup>1</sup></b>	<b>277</b>	<b>308</b>	<b>12,710</b>	<b>\$16,662,805</b>	<b>\$46,182,778</b>	<b>SAND AND GRAVEL, total</b>	<b>32</b>	<b>35</b>	<b>566</b>	<b>\$729,340</b>	<b>\$3,516,756</b>
Not reported.....	2	3	187	209,506	447,815	48.....	3	4	61	70,875	181,092
Under 25.....	5	5				54 and over but under 63.....	27	29	505	668,465	3,335,604
25 and over but under 36.....	11	13	1,296	1,415,159	2,037,272	63 and over.....	2	2			
36 and over but under 40.....	4	4	131	123,346	206,325	<b>BARITE, total</b>	<b>30</b>	<b>31</b>	<b>545</b>	<b>375,217</b>	<b>835,778</b>
40.....	15	16	573	672,589	1,521,983	Not reported.....	2	3	18	13,556	34,488
Over 40 but under 44.....	3	3	66	64,967	210,731	25 and over but under 36.....	2	2			
44 and over but under 48.....	15	18	510	598,358	1,600,236	44 and over but under 48.....	1	1	149	127,108	214,488
48.....	86	94	6,281	8,817,726	28,728,295	54 and over but under 63.....	18	18	378	234,553	586,802
Over 48 but under 54.....	13	14	231	204,428	662,475	<b>CLAY, total</b>	<b>21</b>	<b>29</b>	<b>314</b>	<b>820,512</b>	<b>910,532</b>
54 and over but under 63.....	120	135	3,393	3,439,956	10,425,108	40.....	1	1	150	171,891	508,158
63 and over.....	3	3	68	65,770	342,538	44 and over but under 48.....	4	4	76	77,021	166,653
						48.....	9	10	82	71,600	241,721
<b>COAL, BITUMINOUS, total<sup>1</sup></b>	<b>72</b>	<b>76</b>	<b>4,030</b>	<b>4,595,370</b>	<b>8,713,614</b>	54 and over but under 63.....	7	14	299	335,909	752,978
Under 25.....	4	4	175	200,643	402,408	<b>MARBLE, total</b>	<b>0</b>	<b>8</b>	<b>299</b>	<b>335,909</b>	<b>752,978</b>
25 and over but under 36.....	8	10	1,272	1,397,123	2,004,834	44 and over but under 48.....	2	4	209	335,909	752,978
36 and over but under 40.....	3	3	118	101,322	161,831	<b>STONE, MISCELLANEOUS, total<sup>1</sup></b>	<b>16</b>	<b>16</b>	<b>259</b>	<b>277,677</b>	<b>609,334</b>
40.....	12	13	537	634,604	1,399,773	36 and over but under 40.....	1	1	120	129,728	249,965
Over 40 but under 44.....	1	1	111	182,690	568,171	44 and over but under 48.....	1	1			
44 and over but under 48.....	2	2	1,640	1,840,213	3,542,871	48.....	3	3	139	147,949	359,369
48.....	36	37	183	209,375	634,026	54 and over but under 63.....	10	10	251	307,847	611,632
54 and over but under 63.....	6	6				63 and over.....	1	1			
<b>LEAD, total<sup>1</sup></b>	<b>9</b>	<b>11</b>	<b>3,764</b>	<b>5,905,189</b>	<b>22,937,482</b>	<b>ZINC, total<sup>1</sup></b>	<b>7</b>	<b>10</b>	<b>251</b>	<b>307,847</b>	<b>611,632</b>
25 and over but under 36.....	1	1				Over 40 but under 44.....	1	1			
48.....	8	10	3,764	5,905,189	22,937,482	48.....	4	7	251	307,847	611,632
<b>LIMESTONE, total<sup>1</sup></b>	<b>68</b>	<b>74</b>	<b>2,312</b>	<b>2,397,031</b>	<b>6,116,411</b>	54 and over but under 63.....	2	2			
40.....	1	1	51	37,363	174,576						
44 and over but under 48.....	3	3	151	205,037	393,941						
48.....	3	3	224	258,923	654,666						
Over 48 but under 54.....	12	13	1,880	1,898,703	4,893,229						
54 and over but under 63.....	49	54									

<sup>1</sup> See headnote.

## MINES AND QUARRIES—MISSOURI

TABLE 7.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 131 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 detailed power-equipment information. Of the 277 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 34]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—							
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	10,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	243	18	64	60	43	30	21	3	4
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	162,085	328	4,174	9,438	15,506	20,071	28,300	8,823	75,355
Prime movers, total horsepower.....	55,762	270	1,953	3,530	9,138	5,784	14,722		20,351
Steam engines—									
Number.....	314	1	34	46	68	48	110		7
Horsepower.....	27,267	16	900	2,378	5,783	4,602	9,478		4,215
Steam turbines—									
Number.....	7						3		4
Horsepower.....	17,336						1,200		16,136
Internal-combustion engines—									
Number.....	186	10	39	25	51	20	35		
Horsepower.....	11,150	263	1,058	1,157	3,355	1,282	4,044		
Horsepower rating of inactive prime movers, included above.....	2,534		72	150	315	140	107		1,750
Electric motors driven by purchased energy—									
Number.....	2,308	6	118	205	240	384	282	128	1,355
Horsepower.....	106,323	40	2,216	5,008	6,368	14,287	18,668	8,823	55,004
Electric motors driven by energy generated by enterprises reporting:									
Number.....	400			4	18	10	94		274
Horsepower.....	18,232			110	391	425	4,211		13,095
Electric generators:									
Number.....	30			2	3	2	12		11
Kilowatts.....	20,685			87	310	142	2,385		17,761

<sup>1</sup> See headnote.

<sup>2</sup> See Table 9 for total horsepower rating of power equipment for all enterprises.

TABLE 8.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.....	13,418	12,829	<b>12,673</b>	13,165	12,076	13,101	13,207	13,314	14,014	14,285	14,287	13,943	13,225	88.7
Coal, bituminous.....	4,657	5,278	5,260	4,931	4,305	4,131	3,973	<i>3,915</i>	4,421	4,677	4,706	4,988	5,175	74.8
Lead.....	3,773	3,043	<b>3,624</b>	3,673	3,732	3,798	3,813	3,837	3,866	3,921	3,875	3,810	3,664	92.4
Limestone.....	2,360	1,775	<i>1,720</i>	2,121	2,266	2,444	2,637	2,683	2,813	2,743	2,050	2,383	1,959	61.1
Sand and gravel.....	566	168	<i>193</i>	451	580	678	679	716	744	717	713	645	475	25.9
Barite.....	545	<i>484</i>	504	535	553	530	547	552	576	578	577	544	539	88.5
Clay.....	314	317	317	315	322	316	313	313	315	309	316	<i>304</i>	311	94.4
Marble.....	299	363	305	305	306	310	302	316	313	298	285	263	238	67.4
Stone, miscellaneous.....	287	173	<i>146</i>	227	272	285	295	316	353	342	320	276	187	41.4
Zinc.....	266	269	250	252	251	220	236	238	<i>216</i>	291	347	343	284	62.2
Silica.....	60	37	43	42	54	54	78	61	76	87	72	59	62	42.5
Other industries.....	321	<i>294</i>	302	313	335	326	335	315	321	322	321	330	331	87.8

MINES AND QUARRIES—MISSOURI

TABLE 9.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Two of the "Other industries," however, were of greater importance in the State than some of the industries shown separately]

	Total	Lead	Coal, bituminous	Limestone	Sand and gravel	Clay	Barite	Marble	Zinc <sup>1</sup>	Stone, miscellaneous	Silica <sup>2</sup>	Other Industries <sup>3</sup>
Number of enterprises <sup>4</sup> .....	408	13	189	73	32	21	30	6	11	19	3	14
Number of mines and quarries.....	439	15	190	79	35	29	31	8	14	19	4	15
Persons engaged in industry, total (all classes).....	14, 689	4, 173	5, 069	2, 520	667	357	574	328	281	299	65	359
Proprietors and firm members.....	241	6	174	18	4	10	8	1	2	10	1	1
Principal salaried officers of corporations <sup>5</sup> .....	181	11	74	31	38	9	1	4	1	1	1	11
Other salaried officers and employees <sup>6</sup> .....	840	383	161	121	59	24	20	24	12	16	3	20
Wage earners (average for the year).....	13, 418	3, 773	4, 657	2, 350	566	314	545	299	266	267	60	321
Principal expenses:												
Salaries and wages—												
Principal officers of corporations <sup>5</sup> .....	\$624, 903	\$36, 703	\$207, 791	\$111, 760	\$90, 564	\$17, 685	\$4, 800	\$18, 000	\$2, 800	-----	\$2, 199	\$32, 700
Other salaried officers and employees <sup>6</sup> .....	\$1, 795, 455	\$947, 480	\$273, 444	\$218, 879	\$109, 618	\$45, 401	\$24, 970	\$51, 891	\$26, 265	\$33, 504	\$4, 892	\$59, 641
Wage earners.....	\$16, 326, 902	\$5, 006, 659	\$5, 150, 487	\$2, 433, 447	\$729, 340	\$320, 512	\$375, 217	\$335, 909	\$323, 175	\$286, 933	\$55, 718	\$406, 560
Contract work.....	\$136, 808	\$47, 157	\$22, 216	\$8, 734	\$729	\$1, 066	\$12, 959	-----	\$8, 359	-----	-----	\$35, 594
Supplies.....	\$5, 836, 202	\$2, 574, 206	\$1, 145, 658	\$936, 092	\$460, 133	\$122, 391	\$56, 451	\$40, 428	\$122, 326	\$153, 057	\$38, 348	\$192, 112
Fuel.....	\$843, 371	\$306, 579	\$136, 959	\$110, 092	\$155, 286	\$20, 990	\$20, 769	\$32, 646	\$18, 882	\$10, 283	\$3, 171	\$27, 717
Purchased electric energy.....	\$2, 415, 781	\$1, 679, 183	\$241, 816	\$251, 340	\$77, 682	\$20, 506	\$18, 980	\$25, 520	\$33, 461	\$17, 791	\$4, 767	\$19, 755
Expenditures for development (included above in "Principal expenses").....	\$1, 330, 000	\$824, 000	\$135, 000	\$119, 000	-----	\$10, 000	\$1, 000	\$36, 000	\$34, 000	\$64, 000	\$10, 000	\$106, 000
Value of products.....	\$47, 276, 257	\$22, 955, 417	\$9, 667, 708	\$6, 175, 012	\$3, 510, 756	\$916, 532	\$835, 778	\$752, 978	\$638, 031	\$628, 763	\$143, 300	\$1, 045, 082
Machinery and other equipment purchased during the year, total cost.....	\$1, 677, 139	\$54, 000	\$907, 225	\$178, 530	\$276, 599	\$26, 198	\$110, 511	\$1, 397	\$81, 225	\$9, 800	\$1, 007	\$32, 747
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	165, 368	80, 432	34, 812	17, 873	16, 332	1, 168	2, 469	1, 026	4, 456	1, 291	328	4, 281
Prime movers, total horsepower <sup>7</sup> .....	57, 700	21, 911	12, 725	4, 221	10, 685	564	1, 978	635	1, 760	633	25	2, 510
Steam engines—												
Number.....	405	7	221	38	98	-----	0	17	10	1	-----	7
Horsepower.....	29, 211	4, 215	12, 467	2, 187	7, 462	-----	218	635	801	35	-----	1, 101
Steam turbines—												
Number.....	7	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Horsepower.....	17, 336	17, 336	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Internal-combustion engines—												
Number.....	186	3	10	40	40	27	31	-----	11	15	1	8
Horsepower.....	11, 159	360	258	2, 034	3, 223	564	1, 700	-----	959	648	25	1, 328
Electric motors driven by purchased energy—												
Number.....	2, 894	1, 466	602	380	195	41	20	39	45	20	17	60
Horsepower.....	107, 662	58, 521	22, 087	13, 652	5, 647	604	491	1, 291	2, 606	608	303	1, 762
Electric motors driven by energy generated by enterprises reporting:												
Number.....	400	298	49	8	-----	-----	8	-----	-----	-----	-----	42
Horsepower.....	18, 282	14, 545	1, 065	10	-----	-----	113	-----	-----	-----	-----	1, 959
Electric generators: <sup>7</sup>												
Number.....	30	14	8	1	-----	-----	4	-----	-----	-----	-----	3
Kilowatts.....	20, 685	18, 661	1, 097	7	-----	-----	185	-----	-----	-----	-----	735
Fuel and electric energy consumed:												
Fuel—												
Coal—												
Anthracite..... tons, 2,240 pounds.....	7	-----	-----	7	-----	-----	-----	-----	-----	-----	-----	-----
Bituminous..... tons, 2,000 pounds.....	245, 036	91, 249	72, 588	23, 196	38, 216	4, 302	1, 972	7, 543	2, 595	847	42	2, 486
Coke..... tons, 2,000 pounds.....	99	86	-----	10	-----	-----	-----	-----	-----	-----	-----	-----
Fuel oils..... gallons.....	1, 083, 431	15, 740	-----	126, 888	49, 494	4, 950	118, 322	2, 120	12, 000	27, 550	51, 800	654, 567
Gasoline and kerosene..... gallons.....	415, 002	4, 123	15, 717	135, 510	124, 900	30, 747	61, 639	-----	3, 500	27, 032	-----	11, 834
Gas, natural..... M cubic feet.....	10, 844	-----	-----	-----	6, 080	-----	-----	-----	4, 764	-----	-----	-----
Electric energy—												
Purchased..... kw.-hours.....	205, 834, 623	168, 645, 516	10, 823, 140	14, 580, 055	3, 202, 244	1, 015, 942	693, 707	1, 210, 621	3, 604, 303	833, 208	250, 960	974, 927
Generated by enterprises reporting..... kw.-hours.....	71, 992, 038	40, 825, 381	27, 080, 000	18, 000	-----	-----	57, 720	-----	-----	-----	-----	4, 010, 937

<sup>1</sup> Includes 1 reduction mill for which separate report was received.

<sup>2</sup> Silica sand, 1 enterprise; tripoli, 2.

<sup>3</sup> Asphalt and bituminous rock, 1 enterprise; granite, 4; iron ore, 6; sand, glass, 2; sand, molding, 1.

<sup>4</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> Includes 2,534 horsepower for inactive prime movers

<sup>7</sup> Includes 1,984 kilowatts for inactive generators.

# MONTANA

On the basis of the industries canvassed for 1929, Montana ranked ninth among the States in value of mineral products and eleventh in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 30.4 per cent greater in 1929 than in 1919.

Statistics for nonproducing (development only) enterprises are given in Table 2, and are not included in any of the other tables shown.

The corporate form of organization was most important among enterprises in the mining industries in Montana in 1929. As shown in Table 3, corporations operated 47.6 per cent of all enterprises, employed 97.3 per cent of the wage earners, and produced 98.1 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises employing wage earners in Montana, 92.4 per cent were in classes having not more than 100 wage earners. These enterprises employed only 12.6 per cent of the total number of wage earners and contributed 9.6 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 5, show that the 48-hour week predominated, while the "54 and over but under 63" class ranked second. In the copper industry practically all the wage earners were in the 48-hour-week class.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 3 enterprises in the "10,000 or more" horsepower group reported 156,131 horsepower, or 77.1 per cent. This amount, together with 20,508 horsepower reported by 5 enterprises in the 2,500-4,999 group, represents 87.3 per cent of the total shown.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The copper industry ranked first in the State, accounting for 76.9 per cent of the total value of products. This industry, together with the bituminous-coal industry, produced 88.4 per cent of the total. The statistics of the copper-mining industry for this State include data for an important zinc-manganese mine operated by a copper producer.

The value of products of the metal-mining industries is not the value of the metals produced or recoverable but is, for the most part, an estimate of the sales value of the ores, concentrates, bullion, and mine-water precipitates or, in other words, the mine and mill products, most of which were not sold by the producers but were smelted, or smelted and refined, by them. The smelting and refining operations and the value of the metals—the final products—are reported by the census of manufactures.

The classification of metal mines, by industries, was determined by the metal of chief value. Therefore, the value of products of the silver-mining industry, for example, represents the value of products for those enterprises classified in that industry, and does not include the mine value of silver contained in the ore or concentrates produced by other metal-mining industries.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)
	1929		1919 <sup>2</sup>			1929		1919 <sup>2</sup>	
	All industries	Revised (for comparative purposes) <sup>3</sup>				All industries	Revised (for comparative purposes) <sup>3</sup>		
Number of enterprises <sup>4</sup> .....	145	141	254	-44.5	Principal expenses: <sup>5</sup>				
Number of mines and quarries.....	173	160	260	-37.2	Salaries.....	\$3,168,527	\$3,126,408	\$2,489,941	25.6
Persons engaged, total.....	15,565	15,500	17,297	-10.4	Wages.....	25,807,052	25,718,006	25,665,851	0.2
Proprietors and firm members.....	86	85	293	-71.0	Contract work.....	272,966	272,966	113,240	141.0
Salaried employees.....	852	840	913	-8.0	Supplies and materials.....	8,144,794	8,088,682	9,471,377	-14.6
Wage earners (average for the year) <sup>6</sup> .....	14,627	14,575	16,091	-9.4	Fuel.....	494,086	482,004	1,252,638	-61.5
Power equipment (total horsepower).....	204,099	201,749	143,473	40.6	Purchased electric energy.....	1,920,386	1,912,430	1,712,301	11.7
					Value of products <sup>7</sup> .....	65,182,707	64,773,509	49,665,675	30.4

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

# MINES AND QUARRIES—MONTANA

157

TABLE 2.—SUMMARY FOR NONPRODUCING ENTERPRISES: 1929

	1929		1928
Number of enterprises.....	60	Principal expenses—Continued. Contract work..... Supplies, fuel, and purchased electric energy..... Expenditures for development (included above in "Principal expenses").....	
Number of mines.....	64		\$36,604
Wage earners (average for the year).....	388		252,950
Power equipment (total horsepower).....	3,655		
Principal expenses:			
Salaries.....	\$67,150		
Wages.....	494,619		750,471

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	145	173	14,627	\$65,192,707	LEAD, total.....	16	17	379	\$1,581,577
Corporations.....	99	96	14,289	63,938,372	Corporations.....	8	9	334	1,364,596
Other <sup>1</sup> .....	76	77	388	1,244,335	Other <sup>1</sup> .....	8	8	45	210,981
COPPER, total.....	7	26	10,508	50,154,473	SILVER, total.....	12	14	292	1,030,622
Corporations <sup>2</sup> .....	7	26	10,508	50,154,473	Corporations.....	8	10	242	936,412
COAL, BITUMINOUS, total.....	66	68	1,983	7,448,138	Other <sup>1</sup> .....	4	4	50	94,210
Corporations.....	17	19	1,784	7,047,634	GOLD, LOBE, total.....	9	9	196	443,806
Other <sup>1</sup> .....	49	49	199	400,504	Corporations <sup>3</sup> .....	9	9	196	443,806

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.  
<sup>2</sup> Includes 3 small enterprises with other forms of organization.  
<sup>3</sup> Includes 2 other forms of organization.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total <sup>3</sup> .....	144	172	14,627	\$25,807,052	\$95,179,226	LEAD, total.....	16	17	379	\$650,643	\$1,581,577
Not reported.....	2	2				1 to 5.....	7	8	10	14,211	45,334
1 to 5.....	58	60	139	179,288	572,458	6 to 20.....	7	7			
6 to 20.....	47	47	495	699,525	1,734,073	21 to 50.....	1	1	363	642,432	1,536,243
21 to 50.....	18	18	499	804,412	1,437,174	101 to 250.....	1	1			
51 to 100.....	10	13	704	1,148,204	2,490,810	SILVER, total <sup>3</sup> .....	11	13	292	509,840	1,027,141
101 to 250.....	6	8	1,119	2,016,920	5,550,126	1 to 5.....	1	1	53	83,504	257,142
251 to 500.....	3	4				6 to 20.....	4	4			
501 to 1,000.....	1	1	11,671	20,958,503	53,288,585	21 to 50.....	5	6	239	426,336	769,999
2,501 and over.....	1	19				51 to 100.....	1	2			
COPPER, total.....	7	26	10,508	18,731,854	50,154,473	GOLD, LOBE, total.....	9	9	196	270,931	443,806
Not reported.....	1	1				1 to 5.....	3	3	5	7,499	15,138
1 to 5.....	2	2	89	51,447	171,314	6 to 20.....	3	3	28	44,894	61,306
6 to 20.....	1	1				21 to 50.....	1	1			
21 to 50.....	1	1				51 to 100.....	2	2	163	218,538	367,362
51 to 100.....	1	1									
101 to 250.....	1	2	10,419	18,680,407	49,983,150						
251 to 500.....	1	2									
2,501 and over.....	1	10									
COAL, BITUMINOUS, total.....	66	68	1,983	3,420,551	7,448,138						
1 to 5.....	36	36	84	94,500	190,622						
6 to 20.....	15	15	119	142,817	203,975						
21 to 50.....	6	6	170	286,374	393,783						
51 to 100.....	3	3	254	491,893	1,007,491						
101 to 250.....	4	6									
251 to 500.....	2	2	1,356	2,404,967	5,652,262						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>3</sup> Exclusive of 1 enterprise employing no wage earners.

## MINES AND QUARRIES—MONTANA

TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Montana was 61, distributed as follows: Coal, bituminous, 48; copper, 1; gold, lode, 3; lead, 5; silver, 2; stone, miscellaneous, 1; zinc, 1. The combined value of products represented by these enterprises was \$414,766]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup>	84	112	14,397	\$25,546,267	\$64,767,911	COAL, BITUMINOUS—Con.					
Not reported	1	1				48	12	13	1,246	\$2,373,989	\$5,410,170
Under 25	1	1				54 and over but under 63	1	1			
25 and over but under 36	3	3	379	563,199	1,193,804	LEAD, total <sup>1</sup>	11	12	351	620,748	1,528,406
Over 40 but under 44	1	1				48	5	5	42	59,044	115,610
44 and over but under 48	4	5	212	332,376	862,020	Over 48 but under 54	1	1			
48	40	61	12,593	22,577,714	56,484,435	54 and over but under 63	5	6	309	561,704	1,412,796
Over 48 but under 54	2	2				SILVER, total <sup>1</sup>	10	12	280	495,087	1,021,809
54 and over but under 63	30	36	1,213	2,072,969	6,312,673	48	2	2	280	495,087	1,021,809
63 and over	2	2				54 and over but under 63	8	10			
COPPER, total <sup>1</sup>	6	25	10,508	18,731,854	50,151,773	GOLD, LODE, total <sup>1</sup>	6	6	185	256,125	430,569
48	5	24	10,508	18,731,854	50,151,773	48	1	1	185	256,125	430,569
54 and over but under 63	1	1				Over 48 but under 54	1	1			
COAL, BITUMINOUS, total <sup>1</sup>	18	20	1,810	3,232,498	7,126,071	54 and over but under 63	4	4			
Under 25	1	1									
25 and over but under 36	3	3	564	858,409	1,715,901						
44 and over but under 48	1	2									

<sup>1</sup> See headnote.

TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 61 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 detailed power-equipment information. Of the 84 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 14]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—						
		25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	10,000 or more
Number of enterprises reporting power equipment <sup>1</sup>	70	19	17	9	10	7	5	
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup>	202,403	964	2,822	3,431	7,111	11,436	20,508	150,131
Prime movers, total horsepower	18,161	271	210	375	2,625	500	7,830	6,356
Steam engines—								
Number	79	2		4	12	1	56	4
Horsepower	13,745	30		300	1,410	500	7,030	4,475
Steam turbines—								
Number	2						2	
Horsepower	800						800	
Internal-combustion engines—								
Number	33	9	3	2	13			6
Horsepower	2,961	211	210	75	590			1,876
Water wheels and water turbines—								
Number	2	1			1			
Horsepower	655	30			625			
Horsepower rating of inactive prime movers, included above	855			50	610		195	
Electric motors driven by purchased energy—								
Number	2,343	45	96	86	142	309	278	1,387
Horsepower	184,242	693	2,612	3,056	4,486	10,936	12,678	149,781
Electric motors driven by energy generated by enterprises reporting:								
Number	68				16		36	16
Horsepower	3,435				648		1,215	1,572
Electric generators:								
Number	4				1		2	1
Kilowatts	1,040				350		596	100

<sup>1</sup> See headnote.

<sup>2</sup> See Table 3 for total horsepower rating of power equipment for all enterprises.

# MINES AND QUARRIES—MONTANA

159

**TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929**

[The month of maximum employment 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 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, total.....	14, 027	<b>14, 677</b>	<b>15, 198</b>	15, 561	15, 704	15, 492	14, 032	13, 843	13, 618	14, 172	14, 681	14, 090	<i>13, 552</i>	86. 3
Copper.....	10, 505	<b>10, 309</b>	<b>10, 803</b>	11, 345	11, 742	11, 769	10, 210	10, 045	9, 692	9, 802	10, 043	10, 752	<i>9, 484</i>	80. 6
Coal, bituminous.....	1, 983	<b>2, 338</b>	<b>2, 323</b>	2, 107	1, 570	1, 500	<i>1, 532</i>	1, 567	1, 692	1, 685	2, 230	2, 261	2, 196	65. 5
Lead.....	379	<b>354</b>	<b>340</b>	<i>336</i>	360	367	391	394	404	407	390	403	398	52. 6
Silver.....	292	<b>320</b>	<b>300</b>	299	<i>287</i>	232	272	284	286	342	358	291	288	63. 4
Gold, lode.....	196	155	155	<i>114</i>	164	190	213	224	215	231	245	236	210	46. 5
Limestone.....	76	80	<i>69</i>	63	83	88	92	74	79	77	84	72	60	63. 4
Sand and gravel.....	52	<i>9</i>	21	60	61	73	98	75	38	67	60	44	13	9. 4
Other industries.....	1, 141	1, 103	1, 107	1, 135	1, 188	1, 178	1, 226	1, 179	1, 212	1, 268	1, 271	931	<i>908</i>	71. 0

**TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929**

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. One of the "Other industries," however, was of greater importance in the State than some of the industries shown separately]

	Total	Copper	Coal, bituminous	Lead <sup>1</sup>	Silver <sup>2</sup>	Gold, lode <sup>3</sup>	Sand and gravel	Limestone	Other industries <sup>4</sup>
Number of enterprises <sup>5</sup> .....	145	7	66	16	12	9	4	7	24
Number of mines and quarries.....	173	20	63	17	14	9	4	8	27
Persons engaged in industry, total (all classes).....	15, 565	11, 061	2, 154	418	334	217	65	80	1, 236
Proprietors and firm members.....	86	3	56	10	8	3	1	-----	5
Principal salaried officers of corporations <sup>6</sup> .....	48	5	18	7	5	4	3	-----	6
Other salaried officers and employees <sup>6</sup> .....	804	545	97	22	29	14	9	4	84
Wage earners (average for the year).....	14, 027	10, 505	1, 983	379	292	196	52	76	1, 141
Principal expenses:									
Salaries and wages—									
Principal officers of corporations <sup>6</sup> .....	\$174, 597	\$24, 483	\$70, 638	\$5, 842	\$18, 600	\$12, 830	\$10, 744	-----	\$31, 280
Other salaried officers and employees <sup>6</sup> .....	\$2, 933, 030	\$2, 327, 790	\$249, 000	\$21, 343	\$51, 833	\$50, 023	\$21, 375	-----	\$242, 301
Wage earners.....	\$25, 807, 052	\$18, 731, 854	\$3, 429, 551	\$568, 043	\$509, 840	\$270, 931	\$59, 040	\$5, 555	\$2, 004, 447
Contract work.....	\$272, 066	\$15, 755	\$196, 876	\$23, 249	\$24, 082	-----	-----	-----	\$12, 304
Supplies.....	\$8, 144, 794	\$6, 956, 041	\$818, 041	\$317, 323	\$170, 969	\$124, 003	\$56, 132	\$60, 757	\$945, 023
Fuel.....	\$494, 086	\$346, 410	\$87, 462	\$15, 345	\$8, 065	\$2, 093	\$12, 082	\$8, 931	\$62, 193
Purchased electric energy.....	\$1, 029, 386	\$1, 416, 315	\$156, 490	\$48, 419	\$48, 884	\$31, 969	\$16, 956	\$9, 089	\$207, 304
Expenditures for development (included above in "Principal expenses").....	\$4, 289, 000	\$2, 799, 000	\$479, 000	\$205, 000	\$284, 000	\$90, 000	-----	\$1, 000	\$431, 000
Value of products.....	\$65, 152, 707	\$50, 154, 473	\$7, 448, 138	\$1, 581, 577	\$1, 030, 622	\$443, 806	\$400, 198	\$242, 658	\$3, 872, 235
Machinery and other equipment purchased during the year, total cost.....	\$1, 333, 952	\$503, 281	\$591, 057	\$39, 572	\$36, 642	\$46, 409	\$90, 702	\$5, 315	\$20, 974
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	204, 099	144, 805	28, 896	3, 250	3, 611	2, 015	2, 350	1, 610	17, 472
Prime movers, total horsepower <sup>4</sup> .....	18, 332	6, 625	5, 941	585	115	437	1, 110	380	689
Steam engines—									
Number.....	100	8	71	4	-----	2	11	4	-----
Horsepower.....	14, 416	6, 625	6, 266	400	-----	15	810	300	-----
Steam turbines—									
Number.....	2	-----	2	-----	-----	-----	-----	-----	-----
Horsepower.....	800	-----	800	-----	-----	-----	-----	-----	-----
Internal-combustion engines—									
Number.....	33	-----	6	3	3	7	11	-----	3
Horsepower.....	2, 961	-----	1, 875	185	115	422	300	-----	64
Water wheels and water turbines—									
Number.....	2	-----	-----	-----	-----	-----	-----	1	-----
Horsepower.....	655	-----	-----	-----	-----	-----	-----	30	-----
Electric motors driven by purchased energy—									
Number.....	2, 333	1, 262	424	118	97	64	24	24	370
Horsepower.....	185, 297	138, 270	19, 955	2, 665	3, 496	1, 578	1, 240	1, 280	16, 733
Electric motors driven by energy generated by enterprises reporting:									
Number.....	68	-----	52	-----	-----	-----	-----	-----	16
Horsepower.....	3, 435	-----	2, 787	-----	-----	-----	-----	-----	648
Electric generators: <sup>7</sup>									
Number.....	4	1	2	-----	-----	-----	-----	-----	1
Kilowatts.....	1, 046	100	596	-----	-----	-----	-----	-----	350
Fuel and electric energy consumed:									
Fuel—									
Coal—									
Anthracite..... tons, 2,240 pounds.....	110	-----	-----	20	-----	-----	-----	-----	90
Bituminous..... tons, 2,000 pounds.....	138, 104	78, 220	39, 367	12	935	196	286	1, 679	17, 409
Coke..... tons, 2,000 pounds.....	46	11	-----	11	-----	24	-----	-----	-----
Fuel oils..... gallons.....	228, 738	-----	-----	197, 469	327	-----	6, 564	-----	24, 423
Gasoline and kerosene..... gallons.....	114, 709	-----	-----	6, 634	10, 393	3, 910	40, 974	-----	46, 798
Electric energy—									
Purchased..... kw.-hours.....	317, 574, 705	259, 332, 810	12, 619, 106	6, 551, 468	7, 658, 779	3, 206, 750	1, 405, 151	135, 302	26, 665, 339
Generated by enterprises reporting..... kw.-hours.....	3, 515, 260	931, 120	2, 009, 140	-----	-----	-----	-----	-----	575, 000

<sup>1</sup> Includes 2 operations on old tailings.  
<sup>2</sup> Includes 1 operation on old tailings.  
<sup>3</sup> Abrasive materials, 1 enterprise; granite, 5; gypsum, 2; iron ore, 1; manganese, 4; marble, 1; silica, 1; stone, miscellaneous, 1; tungsten, 1; zinc, 5 (including 1 reduction mill for which separate report was received and 1 operation on old tailings); miscellaneous minerals (graphite and vermiculite), 2.  
<sup>4</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.  
<sup>6</sup> Includes 855 horsepower for inactive prime movers.  
<sup>7</sup> Includes 100 kilowatts for inactive generators.

## NEBRASKA

On the basis of the industries canvassed for 1929, Nebraska ranked forty-fourth among the States in value of mineral products and forty-fifth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the 1929 figures to exclude data for the sand and gravel industry, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 57 per cent greater in 1929 than in 1919.

The corporate form of organization was most common among enterprises in the mining industries in Nebraska in 1929. As shown in Table 2, corporations operated 79.2 per cent of all enterprises, employed 89.2 per cent of the wage earners, and produced 92.5 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 3 shows the size of enterprises as measured by the number of wage earners employed. All enterprises

in the State were in classes having not more than 50 wage earners.

The statistics for the number of hours in the working week for wage earners, given in Table 4, show that the "54 and over but under 63" class predominated, while the 48-hour class ranked second. In the sand and gravel industry practically all of the wage earners were in the "54 and over but under 63" class.

Table 5 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 9 enterprises in the "500 or more" horsepower group reported 7,393 horsepower, or 68.9 per cent.

The statistics for wage earners presented in Table 6, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 7 presents the 1929 statistics in detail for the State as a whole and for sand and gravel, the only industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises. This industry ranked first in the State, accounting for 78.5 per cent of the total value of products.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919			1929		1919	
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>3</sup> .....	24	6	9	(9)					
Number of mines and quarries.....	48	8	9	(9)	Principal expenses: <sup>7</sup>				
Persons engaged, total.....	351	157	188	-15.6	Salaries.....	\$ 106,132	\$ 80,337	\$ 27,137	122.8
Proprietors and firm members.....	4		5		Wages.....	481,368	182,110	166,202	9.6
Salaried employees.....	68	20	19	(9)	Contract work.....	5,490			
Wage earners (average for the year) <sup>6</sup> .....	279	137	162	-15.4	Supplies and materials.....	179,096	73,796	60,996	21.0
Power equipment (total horsepower).....	10,732	1,905	1,847	-13.1	Fuel.....	35,613	5,961	11,800	-49.5
					Purchased electric energy.....	170,514	16,302	9,376	73.0
					Value of products <sup>8</sup> .....	2,139,787	459,628	292,766	57.0

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

# MINES AND QUARRIES—NEBRASKA

161

**TABLE 2.—CHARACTER OF ORGANIZATION, FOR ALL INDUSTRIES AND FOR THE SAND AND GRAVEL INDUSTRY: 1929**

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	24	48	279	\$2, 139, 767	SAND AND GRAVEL, total.....	18	40	142	\$1, 680, 139
Corporations.....	19	43	249	1, 978, 838	Corporations.....	15	37	130	1, 691, 274
Other <sup>1</sup> .....	5	5	30	160, 929	Other <sup>1</sup> .....	3	3	12	88, 865

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

**TABLE 3.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR ALL INDUSTRIES AND FOR THE SAND AND GRAVEL INDUSTRY: 1929**

INDUSTRY AND SPECIFIED NUMBER OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBER OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	24	48	279	\$481, 368	\$2, 139, 767	SAND AND GRAVEL, total.....	18	40	142	\$299, 258	\$1, 680, 139
1 to 5.....	9	11	36	66, 320	322, 685	1 to 5.....	9	11	36	66, 320	322, 685
6 to 20.....	11	28	118	233, 435	1, 213, 443	6 to 20.....	8	25	106	232, 938	1, 367, 454
21 to 50.....	4	9	125	181, 613	608, 630	21 to 50.....	1	4			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

**TABLE 4.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR ALL INDUSTRIES AND FOR THE SAND AND GRAVEL INDUSTRY: 1929**

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total.....	24	48	279	\$481, 368	\$2, 139, 767	SAND AND GRAVEL, total.....	18	40	142	\$299, 258	\$1, 680, 139
48.....	3	5	55	74, 120	264, 890	54 and over but under 63.....	16	36	142	299, 258	1, 680, 139
54 and over but under 63.....	19	39	224	407, 243	1, 874, 877	63 and over.....	2	4			
63 and over.....	2	4									

**TABLE 5.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929**

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—			TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—		
		25 to 249 <sup>1</sup>	250 to 499	500 or more			25 to 249 <sup>1</sup>	250 to 499	500 or more
Number of enterprises reporting power equipment.....	24	8	7	9	Prime movers, etc.—Continued.				
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	10, 732	1, 094	2, 245	7, 393	Prime movers, horsepower—Continued.				
Prime movers, total horsepower.....	2, 280	364	260	1, 656	Internal-combustion engines—				
Steam engines—					Number.....	24	7	8	14
Number.....	18	2	2	14	Horsepower.....	1, 289	288	210	791
Horsepower.....	991	76	60	865	Electric motors driven by purchased energy—				
					Number.....	154	8	33	113
					Horsepower.....	8, 452	730	1, 985	5, 737

<sup>1</sup> Includes the group "100 to 249."

## MINES AND QUARRIES—NEBRASKA

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR ALL INDUSTRIES AND FOR THE SAND AND GRAVEL INDUSTRY: 1929

[The month of maximum employment 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 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, total	279	<i>107</i>	118	169	272	320	382	389	375	339	340	302	232	27.5
Sand and gravel	142	<i>27</i>	42	58	131	148	176	188	200	205	206	176	113	13.1
Other industries	137	80	<i>76</i>	81	141	172	206	201	175	134	134	126	119	36.9

TABLE 7.—DETAILED STATISTICS FOR ALL INDUSTRIES AND FOR THE SAND AND GRAVEL INDUSTRY: 1929

[This table presents statistics for the industry for which it is possible to give separate figures without disclosing data for individual enterprises]

	Total	Sand and gravel	Other industries <sup>1</sup>		Total	Sand and gravel	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup>	24	18	6	Prime movers and electric motors driven by purchased energy, aggregate horsepower	10,732	9,127	1,605
Number of mines and quarries	48	40	8	Prime movers, total horsepower	2,280	1,997	283
Persons engaged in industry, total (all classes)	351	194	157	Steam engines—			
Proprietors and firm members	4	4		Number	18	16	2
Principal salaried officers of corporations <sup>3</sup>	12	9	3	Horsepower	991	915	76
Other salaried officers and employees <sup>3</sup>	56	39	17	Internal-combustion engines—			
Wage earners (average for the year)	279	142	137	Number	24	16	8
Principal expenses:				Horsepower	1,289	1,082	207
Salaries and wages—				Electric motors driven by purchased energy—			
Principal officers of corporations <sup>3</sup>	\$70,900	\$40,900	\$30,000	Number	154	116	38
Other salaried officers and employees <sup>3</sup>	\$125,232	\$94,895	\$30,337	Horsepower	8,452	7,130	1,322
Wage earners	\$481,368	\$299,258	\$182,110	Fuel and electric energy consumed:			
Contract work	\$5,490	\$5,490		Fuel—			
Supplies	\$179,096	\$105,300	\$73,796	Coal—			
Fuel	\$35,613	\$29,652	\$5,961	Anthracite..... tons, 2,240 pounds	15		15
Purchased electric energy	\$170,514	\$154,212	\$16,302	Bituminous..... tons, 2,000 pounds	2,927	2,786	141
Value of products	\$2,139,787	\$1,680,139	\$459,648	Fuel oils..... gallons	42,000	2,000	40,000
Machinery and other equipment purchased during the year, total cost	\$139,542	\$110,697	\$28,845	Gasoline and kerosene..... gallons	122,637	103,122	19,515
				Electric energy, purchased..... kw.-hours	7,667,829	6,624,681	1,043,148

<sup>1</sup> Abrasive materials, 1 enterprise; limestone, 5.<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

# NEVADA

On the basis of the industries canvassed for 1929, Nevada ranked twenty-first among the States in value of mineral products and twenty-sixth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the 1929 figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 46.8 per cent greater in 1929 than in 1919. While the combined value of products of the gold and silver mining industries decreased materially during the period, the value of output of the copper and lead mining industries nearly trebled, as shown in Table 2.

Statistics for nonproducing (development only) enterprises are given in Table 3, and are not included in any other tables shown.

The corporation was the dominant form of organization among enterprises in the mining industries in Nevada in 1929. As shown in Table 4, corporations operated 60.6 per cent of all enterprises, employed 95.5 per cent of the wage earners, and produced 97.3 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 5 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises employing wage earners in Nevada, 82.4 per cent were in classes having not more than 50 wage earners. These enterprises employed only 16.7 per cent of the total number of wage earners and contributed 10.3 per cent of the total value of products.

The statistics for the number of hours in the working week for wage earners, given in Table 6, show that the "54 and over but under 63" class predominated. In the copper industry 95.4 per cent of the wage earners were in this class.

Table 7 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 5 enterprises in the "1,000 or more" group reported 53,829 horsepower, or 74.9 per cent, while all enterprises reporting 500 or more accounted for 64,898 horsepower, or 90.3 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 8, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 9 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises. The copper industry ranked first in the State, accounting for 75 per cent of the total product, and Nevada ranked fifth among the States in 1929 in the copper-mining industry.

The value of products of the metal-mining industries is the value of the ores or concentrates—in other words, the mine and mill products. The smelting and refining operations and the value of the metals—the final products—are reported by the census of manufactures.

The classification of metal mines, by industries, was determined by the metal of chief value. Therefore, the value of products of the gold-mining industry, for example, represents the value of products for those enterprises classified in that industry, and does not include the mine value of gold contained in the ore or concentrates produced by other metal-mining industries.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (—)
	1929		1919			1929		1919	
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>3</sup> .....	104	101	203	-50.2					
Number of mines and quarries.....	107	104	207	-49.8					
Persons engaged, total.....	5,281	5,243	4,860	7.0	Principal expenses: <sup>4</sup>				
Proprietors and firm members.....	55	55	151	-63.0	Salaries.....	\$1,397,007	\$1,383,157	\$1,099,848	25.8
Salaried employees.....	4,510	4,503	478	5.2	Wages.....	8,142,634	8,104,266	7,401,113	9.5
Wage earners (average for the year) <sup>5</sup> .....	4,716	4,685	4,231	10.7	Contract work.....	346,545	331,545	245,420	35.1
Power equipment (total horsepower).....	73,395	72,915	50,786	43.0	Supplies and materials.....	5,274,219	5,222,924	5,339,511	-2.2
					Fuel.....	1,071,350	1,065,306	1,112,427	-4.2
					Purchased electric energy.....	592,172	589,692	638,839	-7.7
					Value of products <sup>7</sup> .....	20,658,631	20,494,536	18,053,984	46.8

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

TABLE 2.—SUMMARY FOR THE COPPER AND LEAD AND THE GOLD AND SILVER MINING INDUSTRIES: 1929 AND 1919

	COPPER AND LEAD		GOLD AND SILVER		PER CENT OF INCREASE OR DECREASE (—)	
	1929	1919 <sup>1</sup>	1929	1919	Copper and lead	Gold and silver
Number of enterprises <sup>1</sup> .....	22	30	45	148	( <sup>2</sup> )	-69.6
Number of mines.....	23	34	46	148	( <sup>2</sup> )	-68.9
Wage earners (average for the year) <sup>3</sup> .....	2,068	1,884	973	2,084	57.5	-53.3
Power equipment (total horsepower).....	45,840	16,069	20,446	32,605	185.3	-37.3
Principal expenses: <sup>4</sup>						
Salaries.....	\$886,953	\$272,780	\$356,715	\$768,425	225.2	-53.4
Wages.....	5,384,062	3,236,703	1,705,026	3,808,482	66.4	-55.2
Contract work.....	215,889	68,117	95,019	177,312	218.9	-46.4
Supplies and materials.....	3,956,898	2,362,403	954,796	2,696,091	67.5	-64.6
Fuel.....	875,671	802,619	77,872	265,463	9.1	-70.7
Purchased electric energy.....	165,790	67,736	354,600	534,707	144.8	-33.7
Value of products.....	20,520,253	7,393,392	3,432,044	9,687,431	177.5	-64.6

<sup>1</sup> The figures for 1919 include data for the zinc-mining industry and therefore are not strictly comparable with those for 1929. The values of products for that industry for both 1929 and 1919 are relatively very small, but can not be given separately without disclosing data for individual enterprises.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Per cent not computed where base is less than 100.

<sup>4</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>5</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>6</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—SUMMARY FOR NONPRODUCING ENTERPRISES: 1929

Number of enterprises.....	77	Principal expenses—Continued	
Number of mines.....	77	Contract work.....	\$12,881
Wage earners (average for the year).....	530	Supplies, fuel, and purchased electric energy.....	558,065
Power equipment (total horsepower).....	7,086	Expenditures for development (included above in "Principal expenses").....	1,102,365
Principal expenses:			
Salaries.....	\$142,314		
Wages.....	792,983		

TABLE 4.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	104	107	4,710	\$26,058,931	GOLD, LODGE, total.....	31	32	363	\$1,568,698
Corporations.....	63	65	4,505	25,930,949	Corporations.....	14	14	282	1,374,484
Other <sup>1</sup> .....	41	42	211	727,682	Other <sup>1</sup> .....	17	18	81	194,214
COPPER, total.....	13	13	2,098	10,984,910	MERCURY, total.....	10	10	207	588,453
Corporations.....	7	7	2,052	19,695,030	Corporations.....	6	6	197	571,985
Other <sup>1</sup> .....	6	6	46	289,874	Other <sup>1</sup> .....	4	4	10	16,468
SILVER, total.....	14	14	610	1,863,346	LEAD, total.....	9	10	270	535,343
Corporations.....	10	10	559	1,718,311	Corporations <sup>2</sup> .....	9	10	270	535,343
Other <sup>1</sup> .....	4	4	51	145,035					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

<sup>2</sup> Includes 2 other forms of organization.

TABLE 5.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total <sup>3</sup> .....	102	105	4,710	\$8,142,634	\$26,048,555	SILVER—Continued					
Not reported.....	3	3			13,959	21 to 50.....	2	2			
1 to 5.....	39	40	116	163,927	411,400	51 to 100.....	3	3	543	\$1,020,824	\$1,642,969
6 to 20.....	33	33	411	655,860	1,307,050	101 to 250.....	2	2			
21 to 50.....	9	10	262	411,634	1,013,650	GOLD, LODGE, total <sup>3</sup> .....	30	31	363	580,196	1,563,098
51 to 100.....	11	12	800	1,252,674	2,706,204	1 to 5.....	13	14	33	43,911	86,082
101 to 250.....	5	5				6 to 20.....	13	13	150	200,900	311,216
501 to 1,000.....	1	1	3,127	5,058,639	21,196,283	21 to 50.....	3	3	180	335,295	1,165,800
1,001 to 2,500.....	1	1				51 to 100.....	1	1			
COPPER, total.....	13	13	2,098	4,885,398	10,984,910	LEAD, total.....	9	10	270	498,664	535,343
1 to 5.....	5	5	15	27,285	58,277	1 to 5.....	3	3	14	23,937	42,839
6 to 20.....	4	4	55	89,863	302,733	6 to 20.....	4	4			
21 to 50.....	1	1				51 to 100.....	1	2	256	474,727	492,604
51 to 100.....	1	1				101 to 250.....	1	1			
101 to 250.....	1	1				MERCURY, total.....	10	10	207	293,104	588,453
501 to 1,000.....	1	1				Not reported.....	1	1			
1,001 to 2,500.....	1	1				1 to 5.....	4	4	14	16,485	70,242
SILVER, total.....	14	14	610	1,124,830	1,863,346	6 to 20.....	2	2			
Not reported.....	1	1				21 to 50.....	1	1	193	276,619	518,211
1 to 5.....	2	2	9	10,458	20,963	51 to 100.....	2	2			
6 to 20.....	4	4	53	93,648	190,414						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>3</sup> Exclusive of 2 enterprises employing no wage earners, in industries as follows: Gold, lode, 1; fluorspar, 1.

MINES AND QUARRIES—NEVADA

TABLE 6.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Nevada was 22, distributed as follows: Copper, 3; gold, 1; lead, 1; silver, 2; zinc, 1. The combined value of products represented by these enterprises was \$191,358.]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products			
ALL INDUSTRIES, total <sup>1</sup> .....	82	85	4,597	\$7,986,749	\$26,467,273	GOLD, LODE, total <sup>1</sup> .....	17	18	288	\$488,124	\$1,454,792			
Not reported.....	3	3	414	620,401	1,297,012	48.....	5	5	44	74,134	121,827			
Under 25.....	1	1				54 and over but under 63.....	12	13	244	413,990	1,332,955			
48.....	27	28				LEAD, total <sup>1</sup> .....	7	8	261	480,964	527,790			
54 and over but under 63.....	51	53	4,183	7,366,348	25,170,261	48.....	2	3	201	480,064	527,790			
COPPER, total <sup>1</sup> .....	10	10	2,690	4,871,743	19,955,613	54 and over but under 63.....	5	5				MERCURY, total.....	10	10
48.....	4	4	124	236,140	487,961	Not reported.....	1	1	207	293,104	588,453			
54 and over but under 63.....	6	6	2,566	4,635,603	19,467,652	48.....	1	1						
SILVER, total <sup>1</sup> .....	12	12	585	1,094,372	1,842,606	54 and over but under 63.....	8	8						
Under 25.....	1	1	585	1,094,372	1,842,606									
48.....	2	2												
54 and over but under 63.....	9	9												

<sup>1</sup> See headnote.

TABLE 7.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 22 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 detailed power-equipment information. Of the 82 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 11.]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	71	9	16	18	8	16	5
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	71,869	124	797	3,006	3,044	11,069	53,829
Prime movers, total horsepower.....	43,495	124	572	1,821	1,048	5,810	33,520
Steam engines—							
Number.....	10			1	1	6	2
Horsepower.....	5,300			60	300	920	4,020
Steam turbines—							
Number.....	5		3				2
Horsepower.....	24,065		66				24,000
Internal-combustion engines—							
Number.....	118	12	19	43	17	22	5
Horsepower.....	13,430	124	507	1,761	1,348	4,690	5,000
Water wheels and water turbines—							
Number.....	3					1	2
Horsepower.....	700					200	500
Horsepower rating of inactive prime movers, included above.....	4,172			152	450	370	3,200
Electric motors driven by purchased energy—							
Number.....	824		20	42	46	173	543
Horsepower.....	23,374		225	1,185	1,390	5,269	20,309
Electric motors driven by energy generated by enterprises reporting:							
Number.....	569			37	1	106	425
Horsepower.....	25,825			226	420	2,179	23,000
Electric generators:							
Number.....	25			7	1	11	6
Kilowatts.....	26,989			269	300	1,045	24,775

<sup>1</sup> See headnote.

<sup>2</sup> See Table 9 for total horsepower rating of power equipment for all enterprises.

TABLE 8.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.....	4,716	4,822	4,851	4,900	5,181	5,079	4,940	4,784	4,567	4,512	4,550	4,352	4,048	78.1
Copper.....	2,698	2,916	2,948	3,002	3,214	3,009	2,759	2,563	2,394	2,394	2,546	2,422	2,219	68.9
Silver.....	610	659	662	655	658	636	652	669	628	564	551	521	461	68.9
Gold, lode.....	363	391	379	396	395	427	431	392	308	311	313	306	304	70.5
Lead.....	270	223	221	222	231	255	285	287	290	296	305	320	306	69.1
Mercury.....	207	167	169	168	164	191	194	249	261	280	206	206	222	55.4
Gypsum.....	99	99	83	118	126	116	111	108	106	102	90	64	59	46.1
Other industries.....	469	367	389	349	391	445	508	516	580	565	524	513	483	60.2

## MINES AND QUARRIES—NEVADA

TABLE 9.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Two of the "Other industries," however, were of greater importance in the State than some of the industries shown separately.]

	Total	Copper	Silver	Gold, lode <sup>1</sup>	Mercury	Lead	Gypsum	Other Industries <sup>2</sup>
Number of enterprises <sup>3</sup> .....	104	13	14	31	10	9	5	22
Number of mines and quarries.....	107	13	14	32	10	10	6	22
Persons engaged in industry, total (all classes).....	5,281	2,904	681	433	227	312	110	524
Proprietors and firm members.....	55	8	4	26	3	4	2	8
Principal salaried officers of corporations <sup>4</sup> .....	55	10	16	11	3	8	—	7
Other salaried officers and employees <sup>4</sup> .....	455	278	51	33	14	30	9	40
Wage earners (average for the year).....	4,716	2,608	610	363	207	270	99	469
Principal expenses:								
Salaries and wages—								
Principal officers of corporations <sup>4</sup> .....	\$273,980	\$102,075	\$63,550	\$25,800	\$12,200	\$50,455	—	\$19,900
Other salaried officers and employees <sup>4</sup> .....	\$1,123,117	\$661,392	\$170,052	\$90,313	\$23,128	\$73,031	—	\$80,721
Wage earners.....	\$3,142,634	\$4,885,308	\$1,124,830	\$580,196	\$293,104	\$498,064	\$128,045	\$632,397
Contract work.....	\$346,545	\$180,809	\$95,019	—	\$5,373	\$29,080	\$3,600	\$26,764
Supplies.....	\$5,274,219	\$3,634,566	\$554,864	\$306,932	\$37,188	\$322,342	\$63,176	\$262,161
Fuel.....	\$1,071,350	\$846,074	\$58,510	\$10,362	\$43,307	\$28,997	\$11,836	\$67,664
Purchased electric energy.....	\$602,172	\$112,164	\$279,144	\$75,456	\$20,734	\$53,636	\$15,920	\$35,128
Expenditures for development (included above in "Principal expenses").....	\$3,300,000	\$2,067,000	\$387,000	\$278,000	\$128,000	\$351,000	\$3,000	\$176,000
Value of products.....	\$26,658,631	\$19,984,010	\$1,863,346	\$1,568,698	\$588,453	\$635,343	\$366,702	\$1,751,179
Machinery and other equipment purchased during the year, total cost.....	\$2,042,221	\$1,436,530	\$163,304	\$23,906	\$108,715	\$238,673	—	\$71,093
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	73,395	43,600	14,820	5,620	1,012	2,240	1,752	4,345
Prime movers, total horsepower <sup>5</sup> .....	44,013	31,331	5,556	1,733	745	650	1,220	2,728
Steam engines—								
Number.....	32	5	—	17	—	1	—	9
Horsepower.....	5,818	4,054	—	669	—	60	—	1,035
Steam turbines—								
Number.....	5	5	—	—	—	—	—	—
Horsepower.....	24,065	24,065	—	—	—	—	—	—
Internal-combustion engines—								
Number.....	118	12	13	18	16	12	13	34
Horsepower.....	13,430	2,762	5,356	1,064	745	590	1,220	1,693
Water wheels and water turbines—								
Number.....	3	2	1	—	—	—	—	—
Horsepower.....	700	500	200	—	—	—	—	—
Electric motors driven by purchased energy—								
Number.....	840	182	337	116	14	111	20	66
Horsepower.....	20,332	12,219	9,270	3,837	267	1,590	532	1,617
Electric motors driven by energy generated by enterprises reporting:								
Number.....	569	428	40	12	31	1	20	37
Horsepower.....	26,825	23,364	1,085	300	186	5	380	505
Electric generators: <sup>6</sup>								
Number.....	25	7	5	2	3	2	—	6
Kilowatts.....	20,989	24,975	850	400	125	32	—	607
Fuel and electric energy consumed:								
Fuel—								
Coal—								
Anthracite..... tons, 2,240 pounds.....	7	7	—	—	—	—	—	—
Bituminous..... tons, 2,000 pounds.....	114,931	110,566	708	117	—	248	—	3,292
Coke..... tons, 2,000 pounds.....	847	847	—	—	—	—	—	—
Fuel oils..... gallons.....	2,463,842	487,145	692,808	131,920	573,330	160,767	337,075	170,767
Gasoline and kerosene..... gallons.....	197,851	15,510	19,494	16,892	22,266	24,023	9,745	89,321
Electric energy—								
Purchased..... kw.-hours.....	43,231,122	8,437,210	21,572,818	6,099,240	1,063,532	3,756,250	490,322	1,761,750
Generated by enterprises reporting..... kw.-hours.....	77,689,940	70,231,100	5,259,494	872,378	515,000	—	534,968	226,500

<sup>1</sup> Includes 1 operation on old tailings.

<sup>2</sup> Clay, 2 enterprises; fluorspar, 2; fuller's and filtering earths, 2; iron ore, 2; limestone, 2; minor metals (tungsten), 2; sand, glass, 2; sand and gravel, 1; silica, 2; stone, miscellaneous, 1; sulphur and pyrites, 1; zinc, 3.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> Includes 4,172 horsepower for inactive prime movers.

<sup>6</sup> Includes 6,122 kilowatts for inactive generators.

## NEW HAMPSHIRE

On the basis of the industries canvassed for 1929, New Hampshire ranked forty-fifth among the States in value of mineral products and forty-third in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) The value of products, as shown in Table 1, was four-tenths of 1 per cent less in 1929 than in 1919. The value of products of the principal industry—the quarrying of granite—was \$706,259 in 1929, as compared with \$1,427,979 for 1919.

The corporate form of organization was most common among enterprises in the mining industries in New Hampshire in 1929. As shown in Table 2, corporations operated 55.6 per cent of all enterprises, employed 49.4 per cent of the wage earners, and produced 55.4 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 3 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in New Hampshire, 69.4 per cent were in classes having not

more than 20 wage earners. These enterprises employed 40.4 per cent of the total number of wage earners and contributed 47.6 per cent of the total value of products.

Table 5 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 8 enterprises in the 250-499 horsepower group reported 2,933 horsepower, or 53.8 per cent, while all enterprises reporting 100 horsepower or more accounted for 4,802 horsepower, or 88 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 6, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 7 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The granite industry ranked first in the State, accounting for 45.2 per cent of the total value of products.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES		Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES		Per cent of increase or decrease (—)	
	1929	1919			1929	1919		
Number of enterprises <sup>2</sup> .....	36	30	(3)	Principal expenses: <sup>5</sup> Salaries..... <sup>4</sup> \$110,748      \$96,324      15.0 Wages.....      772,700      825,547      —3.4 Contract work.....      6,288      34,520      —81.8 Supplies and materials.....      190,009      144,946      31.1 Fuel.....      46,398      41,567      11.6 Purchased electric energy.....      50,665      23,413      116.4				
Number of mines and quarries.....	39	33	(3)					
Persons engaged, total.....	643	757	—15.1					
Proprietors and firm members.....	19	30	(3)					
Salaried employees.....	455	45	(3)					
Wage earners (average for the year) <sup>6</sup> .....	569	682	—16.6					
Power equipment (total horsepower).....	5,455	4,336	25.8		Value of products <sup>7</sup> .....	1,562,337	1,568,195	—0.4

<sup>1</sup> The figures for 1929 and 1919 are not strictly comparable, due to inclusion in 1929 of data for 4 enterprises in the sand and gravel industry, not canvassed for 1919. See GENERAL EXPLANATIONS—Scope of the Census.  
<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>3</sup> Per cent not computed where base is less than 100.  
<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.  
<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.  
<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

TABLE 2.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	36	39	569	\$1,562,337	FELDSPAR, total.....	6	7	72	\$246,139
Corporations.....	20	21	281	895,990	Corporations.....	6	7	72	246,139
Other <sup>1</sup> .....	16	18	288	666,358	Mica total.....	6	6	82	222,728
GRANITE, total.....	18	20	315	706,259	Corporations <sup>2</sup> .....	6	6	82	222,728
Corporations.....	6	6	101	263,746					
Other.....	12	14	214	442,513					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.  
<sup>2</sup> Includes 1 other form of organization.

MINES AND QUARRIES—NEW HAMPSHIRE

TABLE 3.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total	36	39	569	\$772,700	\$1,562,387	MICA, total	6	6	82	\$83,420	\$222,728
1 to 5	7	8	23	23,006	79,839	6 to 20	4	4	82	83,420	222,728
6 to 20	18	19	207	257,939	664,371	21 to 50	2	2			
21 to 50	11	12	339	491,764	818,177	FELDSPAR, total	6	7	72	84,602	246,139
GRANITE, total	18	20	315	455,684	700,259	1 to 5	3	4	10	10,516	24,185
1 to 5	3	3	8	7,990	25,654	6 to 20	2	2			
6 to 20	8	9	98	119,721	178,730	21 to 50	1	1			
21 to 50	7	8	209	327,873	501,875				62	74,086	221,954

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

TABLE 4.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup>	35	38	568	\$771,575	\$1,555,333	MICA, total	6	6	82	\$83,420	\$222,728
40	5	7	127	217,605	283,072	48	1	1	82	83,420	222,728
44 and over but under 48	5	5	75	105,404	166,354	Over 48 but under 54	4	4			
48	9	0	131	149,047	280,347	54 and over but under 63	1	1			
Over 48 but under 54	7	8	75	78,858	174,049	FELDSPAR, total	6	7	72	84,602	246,139
54 and over but under 63	9	9	160	220,601	664,911	48	2	2	72	84,602	246,139
GRANITE, total <sup>1</sup>	17	19	314	454,450	699,205	Over 48 but under 54	3	4			
40	5	7	127	217,605	283,072	54 and over but under 63	1	1			
44 and over but under 48	5	5	75	105,404	166,354						
48	6	0	112	131,381	249,779						
Over 48 but under 54	1	1									
54 and over but under 63											

<sup>1</sup> Exclusive of 1 enterprise whose value of product was less than \$20,000.

TABLE 5.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—				TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 25	25 to 99	100 to 249	250 to 499			Less than 25	25 to 99	100 to 249	250 to 499		
Number of enterprises reporting power equipment <sup>1</sup>	35	7	8	12	8	Prime movers and electric motors—Continued.							
Prime movers and electric motors driven by purchased energy, aggregate horsepower	5,455	125	523	1,880	2,933	Electric motors driven by purchased energy—							
Prime movers, total horsepower	2,250	125	251	1,023	860	Number	96	15	19	62			
Steam engines—						Horsepower	3,196	277	846	2,078			
Number	39	1	6	21	11	Electric motors driven by energy generated by enterprises reporting:							
Horsepower	1,870	10	201	808	860	Number	7		7				
Internal-combustion engines—						Horsepower	150		150				
Number	15	7	2	0		Electric generators:							
Horsepower	310	115	50	145		Number	2		2				
Water wheels and water turbines—						Kilowatts	90		90				
Number	2			2									
Horsepower	70			70									
Horsepower rating of inactive prime movers, included above	103			98	65								

<sup>1</sup> No power equipment was reported by 1 enterprise.

# MINES AND QUARRIES—NEW HAMPSHIRE

169

**TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929**

[The month of maximum employment 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
<b>ALL INDUSTRIES, total</b> .....	<b>569</b>	<b>388</b>	<b>407</b>	<b>426</b>	<b>551</b>	<b>682</b>	<b>723</b>	<b>735</b>	<b>712</b>	<b>697</b>	<b>635</b>	<b>513</b>	<b>361</b>	<b>49.1</b>
Granite.....	315	<b>207</b>	<b>225</b>	<b>219</b>	<b>316</b>	<b>383</b>	<b>398</b>	<b>417</b>	<b>417</b>	<b>393</b>	<b>345</b>	<b>263</b>	<b>203</b>	48.2
Mica.....	82	<b>48</b>	<b>47</b>	<b>92</b>	<b>88</b>	<b>90</b>	<b>93</b>	<b>94</b>	<b>96</b>	<b>98</b>	<b>94</b>	<b>51</b>	<b>51</b>	48.0
Feldspar.....	72	<b>94</b>	<b>85</b>	<b>50</b>	<b>46</b>	<b>75</b>	<b>85</b>	<b>88</b>	<b>76</b>	<b>07</b>	<b>64</b>	<b>59</b>	<b>63</b>	48.4
Other industries.....	100	<b>45</b>	<b>47</b>	<b>65</b>	<b>101</b>	<b>134</b>	<b>137</b>	<b>136</b>	<b>123</b>	<b>134</b>	<b>132</b>	<b>97</b>	<b>44</b>	82.1

**TABLE 7.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929**

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. One of the "Other industries," however, was of greater importance in the State than two of the industries shown separately]

	Total	Granite	Feldspar	Mica	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	36	18	6	6	6
Number of mines and quarries.....	30	20	7	6	6
Persons engaged in industry, total (all classes).....	643	360	77	90	116
Proprietors and firm members.....	19	15	—	1	3
Principal salaried officers of corporations <sup>3</sup> .....	14	11	—	1	2
Other salaried officers and employees <sup>3</sup> .....	41	19	4	7	11
Wage earners (average for the year).....	569	315	72	82	100
Principal expenses:					
Salaries and wages—					
Principal officers of corporations <sup>3</sup> .....	\$31,055	\$21,725	\$3,600	—	\$5,730
Other salaried officers and employees <sup>3</sup> .....	\$79,693	\$59,859	\$4,657	\$15,008	\$19,569
Wage earners.....	\$772,709	\$455,684	\$34,602	\$56,420	\$149,103
Contract work.....	\$6,288	\$530	\$4,268	—	\$1,500
Supplies.....	\$190,009	\$81,914	\$30,079	\$48,981	\$55,435
Fuel.....	\$40,398	\$26,156	\$2,724	\$8,856	\$5,602
Purchased electric energy.....	\$50,665	\$23,419	\$4,559	\$5,889	\$18,798
Expenditures for development (included above in "Principal expenses").....	\$0,000	\$8,000	\$1,000	—	—
Value of products.....	\$1,562,387	\$706,269	\$246,139	\$222,728	\$387,261
Machinery and other equipment purchased during the year, total cost.....	\$47,402	\$7,701	\$2,492	—	\$37,209
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	5,455	3,159	319	458	1,519
Prime movers, total horsepower <sup>4</sup> .....	2,259	1,423	139	207	490
Steam engines—					
Number.....	39	28	1	—	10
Horsepower.....	1,879	1,394	25	—	460
Internal-combustion engines—					
Number.....	15	2	6	6	1
Horsepower.....	310	29	114	137	30
Water wheels and water turbines—					
Number.....	2	—	—	2	—
Horsepower.....	70	—	—	70	—
Electric motors driven by purchased energy—					
Number.....	96	46	5	10	35
Horsepower.....	3,196	1,736	180	251	1,029
Electric motors driven by energy generated by enterprises reporting:					
Number.....	7	—	—	—	7
Horsepower.....	150	—	—	—	150
Electric generators:					
Number.....	2	—	—	—	2
Kilowatts.....	90	—	—	—	90
Fuel and electric energy consumed:					
Fuel—					
Coal—					
Anthracite..... tons, 2,240 pounds.....	30	28	—	2	—
Bituminous..... tons, 2,000 pounds.....	6,067	3,598	78	486	1,905
Coke..... tons, 2,000 pounds.....	7	—	—	7	—
Fuel oils..... gallons.....	66,474	4,062	18,412	35,000	9,000
Gasoline and kerosene..... gallons.....	45,016	6,328	7,188	21,000	10,500
Electric energy—					
Purchased..... kw.-hours.....	2,694,146	1,357,800	239,820	149,900	946,536
Generated by enterprises reporting..... kw.-hours.....	162,000	—	—	—	162,000

<sup>1</sup> Abrasive materials (garnet), 1 enterprise; sand and gravel, 4; stone, miscellaneous, 1.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>4</sup> Includes 163 horsepower for inactive prime movers.

## NEW JERSEY

On the basis of the industries canvassed for 1929, New Jersey ranked twenty-seventh among the States in value of mineral products and thirty-first in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 19.2 per cent greater in 1929 than in 1919. This increase was accounted for principally by the basalt industry.

The corporate form of organization was most common among enterprises in the mining industries in New Jersey in 1929. As shown in Table 2, corporations operated 74.4 per cent of all enterprises, employed 90.9 per cent of the wage earners, and produced 90.9 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 3 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in

New Jersey, 89.7 per cent were in classes having not more than 50 wage earners. These enterprises employed 42.1 per cent of the total number of wage earners and contributed 53.2 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 4, show that 76.3 per cent of the wage earners were employed 54 hours a week or more. In the basalt industry nearly all of the wage earners were in the "54 and over but under 63" class, while in the sand and gravel industry 74.1 per cent were in this class.

Table 5 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 13 enterprises in the "1,000 or more" class reported 38,515 horsepower, or 56.2 per cent.

The statistics for wage earners presented in Table 6, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 7 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises. Accordingly, data for the most important industry, zinc, can not be shown.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919.<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)
	1929		1919			1929		1919	
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>3</sup> .....	117	65	97	(4)					
Number of mines and quarries.....	138	71	102	-30.4					
Persons engaged, total.....	4,222	3,314	5,029	-34.1					
Proprietors and firm members.....	26	14	40	(4)					
Salaried employees.....	566	394	413	-4.6					
Wage earners (average for the year) <sup>4</sup> .....	3,830	2,900	4,576	-38.5					
Power equipment (total horsepower).....	68,584	50,171	33,901	48.0					
					Principal expenses: <sup>7</sup>				
					Salaries.....	\$1,477,322	\$1,066,918	\$726,550	46.8
					Wages.....	5,400,075	4,309,281	5,392,861	-20.1
					Contract work.....	143,483	62,800	57,948	-3.8
					Supplies and materials.....	1,959,779	1,459,859	2,194,539	-33.5
					Fuel.....	585,428	423,321	624,434	-31.9
					Purchased electric energy.....	562,114	359,259	98,354	265.3
					Value of products <sup>8</sup> .....	15,789,610	11,100,362	9,308,902	19.2

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

# MINES AND QUARRIES—NEW JERSEY

171

TABLE 2.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	117	138	3,630	\$15,789,610	IRON ORE, total.....	4	4	361	\$1,161,159
Corporations.....	87	102	3,298	14,357,681	Corporations.....	4	4	361	1,161,159
Other <sup>1</sup> .....	30	36	332	1,431,929	LIMESTONE, total.....	5	6	234	1,013,315
SAND AND GRAVEL, total.....	33	41	505	3,696,535	Corporations.....	5	6	234	1,013,315
Corporations.....	26	32	438	3,308,037	CLAY, total.....	17	19	328	801,528
Other <sup>1</sup> .....	7	9	67	388,498	Corporations.....	9	9	224	556,858
BASALT, total.....	26	27	683	3,580,184	Other <sup>1</sup> .....	8	10	104	244,670
Corporations.....	19	20	564	2,946,108	SAND, MOLDING, total.....	16	23	162	674,278
Other <sup>1</sup> .....	7	7	119	634,016	Corporations.....	13	18	146	611,069
					Other <sup>1</sup> .....	3	5	16	63,209

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

TABLE 3.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	
ALL INDUSTRIES, total.....	117	138	3,630	\$5,400,075	\$15,789,610	SAND AND GRAVEL—Continued						
Not reported.....	3	3			70,148	21 to 50.....	6	7	322	\$497,527	\$1,393,070	
1 to 5.....	21	22	75	108,423	410,335	51 to 100.....	2	5				
6 to 20.....	52	60	562	848,177	4,162,346	IRON ORE, total.....	4	4	301	595,079	1,161,159	
21 to 50.....	20	35	890	1,325,391	3,764,084	51 to 100.....	3	3	361	595,079	1,161,159	
51 to 100.....	9	13	656	1,002,151	2,404,056	101 to 250.....	1	1				
101 to 250.....	2	2		1,447	2,115,933	4,078,641	CLAY, total.....	17	10	328	371,311	801,528
1,001 to 2,500.....	1	2										
BASALT, total.....	26	27	683	1,104,636	3,580,184	1 to 5.....	4	5	14	13,395	45,205	
1 to 5.....	2	2	145	271,037	937,514	6 to 20.....	6	7	68	67,456	202,443	
6 to 20.....	11	11	269	442,717	1,365,590	21 to 50.....	7	7	246	200,460	553,880	
21 to 50.....	9	9	269	300,832	1,277,030	LIMESTONE, total.....	5	6	234	422,687	1,013,315	
51 to 100.....	4	5	269			1 to 5.....	1	1				
SAND AND GRAVEL, total.....	33	41	505	793,788	3,696,535	6 to 20.....	3	3	234	422,687	1,013,315	
1 to 5.....	3	3	26	45,765	199,241	21 to 50.....	1	2				
6 to 20.....	17	21	157	250,496	2,104,224	101 to 250.....	1	1				

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

TABLE 4.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	115	136	3,622	\$5,389,230	\$15,771,230	SAND AND GRAVEL—Contd.					
Not reported.....	3	3			70,148	Over 48 but under 54.....	4	6	67	\$81,440	\$279,317
40.....	4	6	139	207,919	450,429	54 and over but under 63.....	22	28	374	596,448	3,019,655
44 and over but under 48.....	6	6	53	96,710	263,183	IRON ORE, total.....	4	4	301	595,079	1,161,159
48.....	16	16	370	604,109	1,380,400	40.....	1	1	301	595,079	1,161,159
Over 48 but under 54.....	21	26	295	331,533	941,532	48.....	3	3			
54 and over but under 63.....	63	76	2,765	4,148,900	12,645,538	CLAY, total.....	17	19	328	371,311	801,528
63 and over.....	2	3				48.....	4	4	38	40,450	105,068
BASALT, total.....	26	27	683	1,104,636	3,580,184	Over 48 but under 54.....	6	7	110	93,282	268,327
44 and over but under 48.....	1	1	44	88,043	275,798	54 and over but under 63.....	7	8	180	231,579	428,133
48.....	2	2	639	1,016,593	3,304,380	LIMESTONE, total <sup>1</sup> .....	4	5	231	417,187	1,003,315
54 and over but under 63.....	23	24				54 and over but under 63.....	3	3	231	417,187	1,003,315
SAND AND GRAVEL, total.....	33	41	505	793,788	3,696,535	63 and over.....	1	2			
40.....	1	1	45	77,950	174,791						
44 and over but under 48.....	3	3	19	37,950	222,772						
48.....	3	3									

<sup>1</sup> Exclusive of 2 enterprises whose value of product was less than \$20,000, in industries as follows: Limestone, 1; stone, miscellaneous, 1.

## MINES AND QUARRIES—NEW JERSEY

TABLE 5.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	109	3	18	21	34	20	13
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	68,584	52	1,056	3,826	11,796	13,339	38,516
Prime movers, total horsepower.....	38,138	32	638	1,726	4,075	4,591	27,076
Steam engines—							
Number.....	140	1	7	12	25	58	37
Horsepower.....	14,404	20	199	574	1,511	3,343	8,757
Steam turbines—							
Number.....	5						5
Horsepower.....	14,252						14,252
Internal-combustion engines—							
Number.....	169	2	13	30	38	25	61
Horsepower.....	9,432	12	439	1,152	2,564	1,248	4,067
Horsepower rating of inactive prime movers, included above.....	8,727				80	65	8,582
Electric motors driven by purchased energy—							
Number.....	704	1	15	61	208	224	197
Horsepower.....	30,446	20	413	2,100	7,721	8,748	11,439
Electric motors driven by energy generated by enterprises reporting:							
Number.....	367			17	0		344
Horsepower.....	9,942			342	40		9,560
Electric generators:							
Number.....	10				2		8
Kilowatts.....	11,312				52		11,260

<sup>1</sup> No power equipment was reported by 8 enterprises.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.....	3,630	3,282	<b>3,263</b>	3,436	3,617	3,639	3,682	3,758	3,846	3,794	3,861	3,749	3,629	84.5
Basalt.....	683	568	<i>560</i>	614	708	726	729	741	738	734	713	709	653	75.6
Sand and gravel.....	605	468	<i>452</i>	610	646	540	539	526	489	504	494	494	462	82.8
Iron ore.....	361	281	<i>278</i>	268	276	282	275	337	421	448	490	478	494	54.3
Clay.....	328	316	<i>308</i>	320	325	336	363	337	336	331	345	322	302	85.6
Limestone.....	234	215	<i>236</i>	247	255	222	245	243	248	238	236	227	196	76.9
Sand, molding.....	162	<i>97</i>	106	152	171	177	187	190	191	194	185	149	140	49.7
Silica.....	62	<i>53</i>	59	62	66	63	62	68	62	63	61	59	62	80.3
Sand, glass.....	57	58	<i>53</i>	44	49	60	52	60	60	62	63	61	56	69.8
Other industries.....	1,238	1,226	<i>1,211</i>	1,216	1,221	1,233	1,239	1,258	1,284	1,235	1,254	1,250	1,264	95.8

MINES AND QUARRIES—NEW JERSEY

173

TABLE 7.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. One of the "Other industries," however, was of greater importance in the State than some of the industries shown separately]

	Total	Sand and gravel	Basalt	Iron ore	Limestone	Clay	Sand, molding	Silica	Sand, glass	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	117	33	26	4	5	17	16	5	3	8
Number of mines and quarries.....	138	41	27	4	6	19	23	5	3	10
Persons engaged in industry, total (all classes).....	4,222	643	794	406	250	373	199	79	66	1,406
Proprietors and firm members.....	26	6	7	-----	-----	6	6	-----	-----	1
Principal salaried officers of corporations <sup>3</sup> .....	110	38	32	4	3	13	11	5	4	-----
Other salaried officers and employees <sup>3</sup> .....	456	94	72	41	19	26	20	12	5	167
Wage earners (average for the year).....	3,630	505	683	361	234	328	162	62	57	1,238
Principal expenses:										
Salaries and wages—										
Principal officers of corporations <sup>3</sup> .....	\$396,727	\$127,367	\$144,720	\$5,570	\$20,625	\$33,595	\$38,450	\$17,300	\$9,100	-----
Other salaried officers and employees <sup>3</sup> .....	\$1,080,595	\$192,184	\$197,297	\$81,520	\$70,152	\$44,369	\$32,263	\$27,497	\$11,040	\$454,303
Wage earners.....	\$5,400,075	\$793,788	\$1,104,636	\$595,079	\$422,037	\$371,311	\$211,280	\$84,046	\$85,726	\$1,731,522
Contract work.....	\$143,483	\$54,895	-----	\$18,435	\$26,181	\$8,244	\$35,728	-----	-----	-----
Supplies.....	\$1,950,779	\$369,769	\$518,694	\$243,756	\$245,514	\$54,656	\$83,940	\$17,658	\$41,711	\$379,081
Fuel.....	\$586,423	\$101,155	\$77,602	\$33,454	\$31,055	\$18,676	\$27,749	\$11,753	\$33,203	\$250,781
Purchased electric energy.....	\$562,114	\$150,745	\$108,055	\$100,317	\$22,429	\$8,252	\$20,648	\$41,287	\$31,462	\$12,910
Expenditures for development (included above in "Principal expenses").....	\$105,000	-----	\$52,000	\$44,000	-----	-----	\$9,000	-----	-----	-----
Value of products.....	\$15,789,610	\$3,096,535	\$3,580,134	\$1,161,169	\$1,013,315	\$801,528	\$674,278	\$321,310	\$318,435	\$4,222,866
Machinery and other equipment purchased during the year, total cost.....	\$822,577	\$254,551	\$75,369	\$53,193	\$15,200	\$8,958	\$73,481	\$3,164	\$24,812	\$313,859
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	68,584	15,017	14,510	8,741	2,350	4,297	2,325	1,389	1,071	18,014
Prime movers, total horsepower <sup>4</sup> .....	38,133	6,529	4,439	2,400	1,190	3,787	883	295	435	18,180
Steam engines—										
Number.....	140	60	31	7	2	26	7	-----	-----	7
Horsepower.....	14,404	3,013	3,432	2,250	120	1,315	259	-----	-----	3,515
Steam turbines—										
Number.....	5	-----	-----	-----	-----	-----	-----	-----	-----	5
Horsepower.....	14,252	-----	-----	-----	-----	-----	-----	-----	-----	14,252
Internal-combustion engines—										
Number.....	169	53	30	1	4	43	12	4	4	18
Horsepower.....	9,482	3,518	1,007	150	1,070	1,972	624	205	435	413
Electric motors driven by purchased energy—										
Number.....	704	280	186	51	17	24	58	37	40	11
Horsepower.....	30,446	8,488	10,071	6,341	1,160	480	1,442	1,094	636	734
Electric motors driven by energy generated by enterprises reporting:										
Number.....	367	6	-----	16	6	-----	-----	-----	17	322
Horsepower.....	9,942	40	-----	720	350	-----	-----	-----	342	8,490
Electric generators: <sup>5</sup>										
Number.....	10	2	-----	2	1	-----	-----	-----	-----	5
Kilowatts.....	11,312	52	-----	300	325	-----	-----	-----	-----	10,635
Fuel and electric energy consumed:										
Fuel—										
Coal—										
Anthracite..... tons, 2,240 pounds.....	60,853	6	1,096	550	-----	-----	-----	-----	-----	59,201
Bituminous..... tons, 2,000 pounds.....	35,518	0,213	13,043	4,606	1,981	2,740	1,982	700	840	433
Coke..... tons, 2,000 pounds.....	30	-----	-----	30	-----	-----	-----	-----	-----	-----
Fuel oils..... gallons.....	1,797,860	709,228	3,500	30,297	182,744	847	14,015	140,000	510,303	200,926
Gasoline and kerosene..... gallons.....	847,474	390,325	100,047	2,653	17,518	57,990	126,467	6,494	33,318	62,672
Electric energy—										
Purchased..... kw.-hours.....	23,167,307	4,677,469	6,638,292	6,471,660	559,623	220,446	629,295	2,068,000	1,350,241	562,281
Generated by enterprises reporting..... kw.-hours.....	23,675,263	60,000	-----	572,440	1,809,800	-----	-----	-----	-----	21,173,023

<sup>1</sup> Granite, 1 enterprise; marble, 1; sandstone, 2; slate, 1; stone, miscellaneous, 2; zinc, 1.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>4</sup> Includes 8,727 horsepower for inactive prime movers.

<sup>5</sup> Includes 5,555 kilowatts for inactive generators.

## NEW MEXICO

On the basis of the industries canvassed for 1929, (See GENERAL EXPLANATIONS—Scope of the Census) New Mexico ranked twentieth among the States in value of mineral products and twenty-first in number of wage earners employed in mining and quarrying industries. The total value of products, as shown in Table 1, was 43.8 per cent greater in 1929 than in 1919. The value of output of the bituminous-coal industry decreased \$1,581,229, or 16 per cent, while the combined value of products for the gold, silver, copper, lead, and zinc mining industries increased from \$8,135,067 to \$17,470,349, or 114.8 per cent. The value of products of the metal-mining industries is not the value of the metals produced or recoverable but is, for the most part, an estimate of the sales value of the ores, concentrates, bullion, and mine-water precipitates or, in other words, the mine and mill products, most of which were not sold by the producers but were smelted, or smelted and refined, by them. The smelting and refining operations and the value of the metals—the final products—are reported by the census of manufactures. As separate figures for each of these metal-mining industries could not be shown for 1919 on account of the disclosure of data for individual enterprises, comparisons can be made only for the group as a whole for the two years.

Statistics for nonproducing (development only) enterprises are given in Table 2, and are not included in any of the other tables shown.

The corporate form of organization was most common among enterprises in the mining industries in New Mexico in 1929. As shown in Table 3, corporations operated 52.2 per cent of all enterprises, employed 93.9 per cent of the wage earners, and produced 96.6 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in New Mexico, 82.6 per cent were in classes having not

more than 100 wage earners. These enterprises employed only 18 per cent of the total number of wage earners and contributed 12.9 per cent of the total value of products. On the other hand, only 17.4 per cent of the total number of enterprises had more than 100 wage earners each. These enterprises employed 82 per cent of the total number of wage earners and contributed 87.1 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 5, show that the 48-hour week predominated, while the "54 and over but under 63" class ranked second.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 6 enterprises in the "2,500 or more" horsepower group reported a total of 73,758 horsepower, or 81.5 per cent.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The copper industry ranked first in the State, accounting for 49 per cent of the total product, followed in order of importance by bituminous-coal and zinc mining industries. The combined value of products of these three industries was 94.6 per cent of the total for the State.

The classification of metal mines, by industries, was determined by the metal of chief value. Therefore, the value of products of the lead-mining industry, for example, represents the value of products for those enterprises classified in that industry, and does not include the mine value of lead contained in the ore or concentrates produced by other metal-mining industries.

# MINES AND QUARRIES—NEW MEXICO

175

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES		Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES		Per cent of increase or decrease (—)
	1929	1919			1929	1919	
Number of enterprises <sup>2</sup> .....	69	85	(3)	Principal expenses: <sup>6</sup>			
Number of mines and quarries.....	89	103	-13.6		Salaries.....	\$1,286,788	\$1,161,046
Persons engaged, total.....	7,522	7,607	-1.1	Wages.....	10,118,023	10,493,857	-3.6
Proprietors and firm members.....	35	69	(5)	Contract work.....	116,882	131,506	-11.1
Salaried employees.....	4,501	438	14.4	Supplies and materials.....	4,389,541	3,889,454	12.9
Wage earners (average for the year) <sup>3</sup> .....	6,986	7,100	-1.6	Fuel.....	1,390,622	1,262,260	7.6
Power equipment (total horsepower).....	90,961	59,876	51.9	Purchased electric energy.....	308,204	68,950	347.1
				Value of products <sup>7</sup> .....	27,141,704	18,872,560	43.8

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Per cent not computed where base is less than 100.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

TABLE 2.—SUMMARY FOR NONPRODUCING ENTERPRISES: 1929

	1929		1928	
Number of enterprises.....	24	Principal expenses—Continued.		
Number of mines.....	25		Wages.....	\$182,415
Wage earners (average for the year).....	130		Contract work.....	1,400
Power equipment (total horsepower).....	1,415		Supplies, fuel, and purchased electric energy.....	51,053
Principal expenses:		Expenditures for development (included above in "Principal expenses").....	175,125	
Salaries.....	\$21,232			

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	69	89	6,986	\$27,141,764	COAL, BITUMINOUS, total.....	28	43	3,120	\$8,324,312
Corporations.....	36	52	6,503	26,231,053	Corporations.....	11	25	2,991	8,017,200
Other <sup>1</sup> .....	33	37	423	910,711	Other <sup>1</sup> .....	17	18	129	307,112
COPPER, total.....	14	14	2,258	13,293,420	ZINC, total.....	8	9	1,036	4,046,072
Corporations.....	7	7	2,147	13,041,478	Corporations <sup>2</sup> .....	8	9	1,036	4,046,072
Other <sup>1</sup> .....	7	7	111	251,942					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

<sup>2</sup> Includes 1 other form of organization.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	69	89	6,986	\$10,118,023	\$27,141,764	COPPER, total.....	14	14	2,258	\$3,409,470	\$13,293,420
1 to 5.....	15	15	43	45,781	104,806	1 to 5.....	3	3			
6 to 20.....	18	21	193	217,725	403,283	6 to 20.....	4	4			
21 to 50.....	17	18	508	580,052	1,080,606	21 to 50.....	4	4	2,258	3,409,470	13,293,420
51 to 100.....	7	8	512	760,351	1,905,712	51 to 100.....	1	1			
101 to 250.....	5	7	1,446	1,780,525	2,849,243	251 to 500.....	1	1			
251 to 500.....	2	3				1,001 to 2,500.....	1	1			
501 to 1,000.....	4	10	4,284	6,727,589	20,702,114	ZINC, total.....	8	9	1,036	1,420,280	4,046,072
1,001 to 2,500.....	1	1				6 to 20.....	1	1			
COAL, BITUMINOUS, total.....	28	43	3,120	4,587,017	8,324,312	21 to 50.....	3	3	126	178,041	464,519
1 to 5.....	10	10	24	29,573	80,337	51 to 100.....	1	1			
6 to 20.....	8	8	70	80,784	183,593	101 to 250.....	2	3	910	1,251,198	3,581,553
21 to 50.....	2	3	119	182,647	306,250	501 to 1,000.....	1	1			
51 to 100.....	1	1									
101 to 250.....	3	4	404	642,477	1,020,726						
251 to 500.....	1	2									
501 to 1,000.....	3	15	2,443	3,661,531	6,779,406						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

## MINES AND QUARRIES—NEW MEXICO

TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in New Mexico was 24, distributed as follows: Coal, bituminous, 16; copper, 4; gold, placer, 1; lead, 2; limestone, 1. The combined value of products represented by these enterprises was \$220,768]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products		
ALL INDUSTRIES, total <sup>1</sup>	45	65	6,823	\$9,987,448	\$26,914,096	COPPER, total <sup>1</sup>	10	10	2,197	\$3,337,309	\$13,264,393		
25 and over but under 36	2	2	312	433,846	713,961	48	5	5	2,197	3,337,309	13,264,393		
36 and over but under 40	1	2				Over 48 but under 54	1	1					
48	25	43				54 and over but under 63	4	4					
Over 48 but under 54	2	2	3,580	5,080,490	9,813,348	ZINC, total	8	9	1,036	1,429,239	4,046,072		
54 and over but under 63	15	16	2,931	4,423,112	16,387,667	Over 48 but under 54	1	1	1,036	1,429,239	4,046,072		
COAL, BITUMINOUS, total <sup>1</sup>	12	27	3,040	4,498,752	8,165,793	54 and over but under 63	7	8					
25 and over but under 36	2	2	3,040	4,498,752	8,165,793								
36 and over but under 40	1	2											
48	9	23											

<sup>1</sup> See headnote.

TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 24 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 detailed power-equipment information. Of the 46 enterprises whose value of products was \$20,000 or more, no power equipment was reported by 3]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—						
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 or more
Number of enterprises reporting power equipment <sup>1</sup>	42	7	3	8	6	7	5	6
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup>	90,543	106	147	1,250	2,364	5,433	7,485	73,758
Prime movers, total horsepower	72,814	96	82	787	1,544	2,500	6,585	61,220
Steam engines—								
Number	74			7		11		56
Horsepower	35,715			525		1,490		33,700
Steam turbines—								
Number	62						6	56
Horsepower	31,835						4,710	27,126
Internal-combustion engines—								
Number	56	10	6	6	17	5		3
Horsepower	5,174	96	82	292	1,454	1,010	9	395
Water wheels and water turbines—								
Number	3				3			
Horsepower	90				90			
Horsepower rating of inactive prime movers, included above	0,082			62	490	520	675	7,335
Electric motors driven by purchased energy—								
Number	483	1	3	27	24	87	25	316
Horsepower	17,729	10	65	463	820	2,933	900	12,538
Electric motors driven by energy generated by enterprises reporting:								
Number	1,215				10	79	103	933
Horsepower	44,392				270	1,733	5,400	36,939
Electric generators:								
Number	43				2	6	16	19
Kilowatts	33,054				287	957	4,515	27,295

<sup>1</sup> See headnote.

<sup>2</sup> See Table 8 for total horsepower rating of power equipment for all enterprises.

TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total	6,986	7,129	7,210	7,450	7,113	7,160	6,987	7,015	6,893	6,656	6,835	6,815	6,585	88.4
Coal, bituminous	3,120	3,449	3,460	3,470	3,296	3,244	3,120	3,082	2,936	2,758	2,842	2,830	2,947	79.5
Copper	2,258	2,209	2,269	2,388	2,242	2,260	2,288	2,300	2,330	2,253	2,254	2,257	2,080	87.1
Zinc	1,036	995	976	1,030	1,015	1,041	1,029	1,049	1,024	1,048	1,098	1,097	1,029	88.9
Lead	85	80	89	91	79	78	84	82	85	87	88	88	88	85.5
Other industries	487	396	407	471	481	530	496	502	509	510	553	543	441	71.6

# MINES AND QUARRIES—NEW MEXICO

177

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Certain of the "Other industries," however, were of greater importance in the State than one of the industries shown separately.]

	Total	Copper	Coal, bituminous	Zinc <sup>1</sup>	Lead	Other industries <sup>2</sup>
Number of enterprises <sup>3</sup> .....	69	14	28	8	5	14
Number of mines and quarries.....	89	14	43	9	5	18
Persons engaged in industry, total (all classes).....	7,522	2,485	3,324	1,101	90	522
Proprietors and firm members.....	35	9	19	-----	2	5
Principal salaried officers of corporations <sup>4</sup> .....	17	5	9	1	-----	2
Other salaried officers and employees <sup>4</sup> .....	484	213	176	64	3	28
Wage earners (average for the year).....	6,986	2,258	3,120	1,036	85	487
Principal expenses:						
Salaries and wages—						
Principal officers of corporations <sup>4</sup> .....	\$62,645	\$1,550	\$51,825	\$1,800	-----	\$7,470
Other salaried officers and employees <sup>4</sup> .....	\$1,224,141	\$526,869	\$425,977	\$191,093	\$8,960	\$71,242
Wage earners.....	\$10,118,023	\$3,409,470	\$4,587,017	\$1,429,239	\$74,071	\$618,217
Contract work.....	\$116,882	\$18,274	-----	\$66,919	\$1,689	-----
Supplies.....	\$4,889,541	\$2,501,674	\$859,312	\$782,911	\$23,734	\$221,010
Fuel.....	\$1,390,022	\$1,186,534	\$90,969	\$64,048	\$4,140	\$44,936
Purchased electric energy.....	\$308,264	\$14,150	\$167,294	\$97,343	-----	\$29,477
Expenditures for development (including above in "Principal expenses").....	\$2,109,000	\$1,080,000	\$177,000	\$714,000	\$13,000	\$125,000
Value of products.....	\$27,141,764	\$13,298,420	\$8,324,312	\$4,046,072	\$96,322	\$1,381,638
Machinery and other equipment purchased during the year, total cost.....	\$1,198,013	\$844,976	\$125,667	\$163,998	\$3,500	\$67,872
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	90,061	53,087	23,813	8,102	518	4,841
Prime movers, total horsepower <sup>5</sup> .....	73,007	53,092	9,595	6,219	518	3,633
Steam engines—						
Number.....	80	50	11	-----	1	12
Horsepower.....	35,908	20,825	4,815	-----	8	1,290
Steam turbines—						
Number.....	62	54	6	2	-----	-----
Horsepower.....	31,835	23,125	4,710	4,000	-----	-----
Internal combustion engines—						
Number.....	56	5	2	14	8	27
Horsepower.....	5,174	142	70	2,219	510	2,233
Water wheels and water turbines—						
Number.....	3	-----	-----	-----	-----	3
Horsepower.....	90	-----	-----	-----	-----	90
Electric motors driven by purchased energy—						
Number.....	487	12	368	58	-----	49
Horsepower.....	17,054	595	14,218	1,883	-----	1,258
Electric motors driven by energy generated by enterprises reporting:						
Number.....	1,215	648	293	234	-----	40
Horsepower.....	44,392	28,867	10,554	4,195	-----	776
Electric generators: <sup>6</sup>						
Number.....	43	11	11	13	-----	8
Kilowatts.....	33,054	21,045	6,865	4,120	-----	1,024
Fuel and electric energy consumed:						
Fuel—						
Coal, bituminous..... tons, 2,000 pounds.....	239,643	180,326	42,614	12,123	-----	4,550
Fuel oils..... gallons.....	1,021,418	1,419,154	-----	375,203	8,000	119,061
Gasoline and kerosene..... gallons.....	68,134	36,635	-----	2,975	12,220	16,304
Electric energy—						
Purchased..... kw.-hours.....	16,823,556	560,243	9,856,680	5,004,700	-----	1,401,933
Generated by enterprises reporting..... kw.-hours.....	110,862,282	82,640,653	13,567,960	14,469,423	-----	184,246

<sup>1</sup> Includes 1 reduction mill for which separate report was received.

<sup>2</sup> Fluorspar, 1 enterprise; gold, placer, 1; iron ore, 2; limestone, 1; manganese, 1; mica, 2; molybdenum, 1; sand and gravel, 1; sandstone, 1; silver, 1; stone, miscellaneous, 1; miscellaneous minerals, 1.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> Includes 9,082 horsepower for inactive prime movers.

<sup>6</sup> Includes 6,000 kilowatts for inactive generators.

## NEW YORK

On the basis of the industries canvassed for 1929, New York ranked seventeenth among the States in value of mineral products and twenty-third in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 59.4 per cent greater in 1929 than in 1919. Most of the increase was contributed by the substantial growth in each of the stone industries. Of these, the limestone industry shows the greatest increase, from \$4,597,942 in 1919 to \$11,389,087 in 1929. The value of products of the iron-ore industry decreased from \$5,264,443 in 1919 to \$3,554,606 in 1929.

The corporate form of organization was most common among enterprises in the mining industries in New York in 1929. As shown in Table 2, corporations operated 69 per cent of all enterprises, employed 79.4 per cent of the wage earners, and produced 86.6 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 3 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises employing wage earners in New York, 87.9 per cent were

in classes having not more than 50 wage earners. These enterprises employed 40.1 per cent of the total number of wage earners and contributed 37.4 per cent of the total value of products.

The statistics for the number of hours in the working week for wage earners, given in Table 4, show that the "54 and over but under 63" class predominated, while the 48-hour week ranked second. In both the limestone and the sand and gravel industries the majority of wage earners were in the "54 and over but under 63" class.

Table 5 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 26 enterprises in the 1,000-2,499 horsepower group reported 41,083 horsepower, or 28.3 per cent, while all enterprises reporting 500 horsepower or more accounted for 119,459 horsepower, or 82.3 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 6, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 7 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises. The limestone industry ranked first in the State, accounting for 31.6 per cent of the total value of products. This industry, together with the sand and gravel industry, produced 63 per cent of the total. New York ranked fourth among the States in 1929 in the limestone industry and first in the sand and gravel industry.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (-)	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (-)
	1929		1919 <sup>1</sup>			1929		1919 <sup>1</sup>		
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>			
Number of enterprises <sup>3</sup> .....	261	189	189	36.0	Principal expenses: <sup>7</sup>					
Number of mines and quarries.....	298	206	147	40.0	\$ 2,537,043	\$ 1,202,446	\$982,013	22.4		
Persons engaged, total.....	7,213	5,516	5,899	-6.5	10,029,766	7,479,875	6,409,549	16.7		
Proprietors and firm members.....	89	74	86	(4)	Contract work.....	106,328	41,631	172,277	-75.8	
Salaried employees.....	\$ 692	\$ 421	479	-12.1	Supplies and materials.....	5,076,106	4,210,763	3,508,693	20.0	
Wage earners (average for the year) <sup>4</sup> .....	6,432	5,021	5,334	-5.9	Fuel.....	917,527	552,214	775,551	-28.8	
Power equipment (total horsepower).....	145,995	102,389	61,143	67.5	Purchased electric energy.....	1,496,649	1,128,206	435,218	159.2	
					Value of products <sup>8</sup> .....	36,045,204	24,272,177	15,230,199	59.4	

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

MINES AND QUARRIES—NEW YORK

179

TABLE 2.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	261	298	6,432	\$36,045,204	SLATE, total.....	15	15	155	\$728,642
Corporations.....	180	203	5,108	31,202,602	Corporations.....	7	7	109	619,200
Other <sup>1</sup> .....	81	95	1,324	4,842,602	Other <sup>1</sup> .....	8	8	46	109,442
LIMESTONE, total.....	69	73	1,098	11,389,087	SANDSTONE, total.....	30	41	276	680,875
Corporations.....	54	56	1,727	10,423,900	Corporations.....	7	15	119	319,631
Other <sup>1</sup> .....	15	17	271	965,187	Other <sup>1</sup> .....	23	26	157	361,244
SAND AND GRAVEL, total.....	62	60	1,330	11,304,630	STONE, MISCELLANEOUS, total.....	15	15	96	593,407
Corporations.....	53	53	1,237	10,977,218	Corporations.....	7	7	64	437,976
Other <sup>1</sup> .....	9	11	43	327,412	Other <sup>1</sup> .....	8	8	32	155,431
IRON ORE, total.....	5	5	974	3,554,606	GRANITE, total.....	13	13	105	504,519
Corporations <sup>2</sup> .....	5	5	974	3,554,606	Corporations.....	6	6	50	159,629
GYP SUM, total.....	11	11	737	2,092,711	Other <sup>1</sup> .....	7	7	55	344,800
Corporations.....	11	11	737	2,092,711	SAND, MOLDING, total.....	10	23	81	408,397
TALC, total.....	3	4	143	1,196,277	Corporations.....	7	13	67	386,597
Corporations.....	3	4	143	1,196,277	Other <sup>1</sup> .....	3	10	14	81,800
					MARBLE, total.....	9	9	105	393,586
					Corporations <sup>2</sup> .....	9	9	105	393,586

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.  
<sup>2</sup> Includes 1 other form of organization.

TABLE 3.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total <sup>3</sup> .....	266	298	6,432	\$10,029,766	\$36,030,237	SAND AND GRAVEL, total.....	62	60	1,330	\$2,437,200	\$11,304,630
Not reported.....	3	5			32,500	1 to 5.....	23	25	81	150,223	803,163
1 to 5.....	84	80	267	392,050	1,713,879	6 to 20.....	27	31	257	427,379	2,205,927
6 to 20.....	101	117	1,127	1,578,234	5,711,702	21 to 50.....	6	6	179	298,846	1,208,520
21 to 50.....	37	51	1,187	1,831,071	6,000,351	51 to 100.....	4	5			
51 to 100.....	20	23	1,481	2,445,740	8,258,737	101 to 250.....	1	1	813	1,580,861	7,086,020
101 to 250.....	9	9				251 to 500.....	1	1			
251 to 500.....	1	1	2,370	3,782,662	14,313,068	IRON ORE, total.....	5	5	974	1,416,581	3,554,606
501 to 1,000.....	1	1				1 to 5.....	1	1			
LIMESTONE, total.....	69	73	1,098	3,111,408	11,389,087	6 to 20.....	1	1			
1 to 5.....	12	12	31	37,339	118,763	51 to 100.....	1	1	974	1,416,581	3,554,606
6 to 20.....	32	33	387	507,812	1,952,959	101 to 250.....	1	1			
21 to 50.....	13	15	428	646,804	2,177,263	501 to 1,000.....	1	1			
51 to 100.....	8	9	573	852,473	2,533,478	GYP SUM, total.....	11	11	737	1,001,115	2,092,711
101 to 250.....	4	4	579	1,066,980	4,556,634	6 to 20.....	1	1	167	223,707	400,644
						21 to 50.....	4	4			
						51 to 100.....	5	5	570	777,408	1,632,067
						101 to 250.....	1	1			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>3</sup> Exclusive of 5 enterprises employing no wage earners.

## MINES AND QUARRIES—NEW YORK

TABLE 4.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in New York was 24, distributed as follows: Granite, 2; limestone, 3; sandstone, 3; slate, 3; stone, miscellaneous, 7. The combined value of products represented by these enterprises was \$133,664]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	237	274	6,380	\$9,907,159	\$35,861,540	SAND AND GRAVEL, total.....	62	69	1,330	\$2,437,299	\$11,304,630
Not reported.....	2	4				44 and over but under 48.....	2	2	131	229,063	1,072,429
Under 25.....	1	1				48.....	9	11	24	27,727	283,986
25 and over but under 36.....	1	1	123	161,318	413,777	Over 48 but under 54.....	4	5	1,175	2,179,909	9,968,285
40.....	2	2				54 and over but under 63.....	47	51			
Over 40 but under 44.....	1	1				IRON ORE, total.....	5	5	974	1,416,581	3,554,606
44 and over but under 48.....	12	13	129	209,951	563,734	Over 40 but under 44.....	1	1			
48.....	45	52	2,047	2,979,744	8,585,754	48.....	3	3	974	1,416,581	3,554,606
Over 48 but under 54.....	22	30	332	420,023	1,374,486	54 and over but under 63.....	1	1			
54 and over but under 63.....	151	170	3,749	6,196,123	24,923,840	GYPSUM, total.....	11	11	737	1,001,115	2,092,711
LIMESTONE, total <sup>1</sup> .....	66	70	1,902	3,105,301	11,372,265	25 and over but under 36.....	1	1			
44 and over but under 48.....	3	4	61	73,390	205,973	40.....	1	1	497	722,267	1,416,130
48.....	6	6	173	233,637	602,197	48.....	4	4			
Over 48 but under 54.....	3	3	22	30,473	109,869	Over 48 but under 54.....	2	2	240	278,848	676,581
54 and over but under 63.....	54	57	1,731	2,762,751	10,454,228	54 and over but under 63.....	3	3			

<sup>1</sup> See headnote.

TABLE 5.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 24 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 detailed power-equipment information. Of the 237 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 13]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSE-POWER OF—							
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	5,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	219	6	41	72	32	32	26	6	4
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	145,131	76	2,526	11,637	11,433	22,133	41,083	19,054	37,139
Prime movers, total horsepower.....	49,598	41	1,015	3,639	3,535	5,767	13,231	5,525	16,805
Steam engines—									
Number.....	312	2	3	22	43	33	125	15	64
Horsepower.....	38,008	27	215	1,316	2,310	3,005	11,980	2,360	16,805
Steam turbines—									
Number.....	5					2	3		
Horsepower.....	179					125	54		
Internal-combustion engines—									
Number.....	188	3	30	57	22	42	29	5	
Horsepower.....	8,416	14	300	2,303	1,275	2,027	1,197	200	
Water wheels and water turbines—									
Number.....	10			1				9	
Horsepower.....	2,995			20				2,975	
Horsepower rating of inactive prime movers, included above.....	1,096		15	50		135	345		550
Electric motors driven by purchased energy—									
Number.....	2,400	3	80	296	232	472	682	249	336
Horsepower.....	95,533	35	1,511	7,998	7,843	16,426	27,852	13,529	20,334
Electric motors driven by energy generated by enterprises reporting:									
Number.....	105				12	33	38	4	13
Horsepower.....	4,091				154	356	1,011	750	1,320
Electric generators:									
Number.....	19				3	6	3	1	6
Kilowatts.....	7,247				130	525	982	250	5,300

<sup>1</sup> See headnote.

<sup>2</sup> See Table 7 for total horsepower rating of power equipment for all enterprises.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.....	6,432	<i>4,600</i>	5,203	5,843	6,028	6,082	7,188	7,905	7,258	7,138	6,904	6,359	5,721	63.0
Limestone.....	1,998	<i>868</i>	1,340	1,822	2,123	2,298	2,905	2,429	2,455	2,395	2,276	1,945	1,633	35.4
Sand and gravel.....	1,330	<i>1,031</i>	1,413	1,151	1,413	1,447	1,490	1,552	1,517	1,532	1,450	1,313	1,079	65.2
Iron ore.....	974	<i>996</i>	1,050	1,036	950	902	839	855	842	880	945	1,057	1,286	65.2
Gypsum.....	737	<i>748</i>	734	724	747	792	792	781	783	781	754	695	579	78.9
Sandstone.....	276	<i>187</i>	147	201	332	360	377	351	335	326	306	243	105	36.3
Slate.....	155	<i>146</i>	156	158	164	159	172	168	171	187	153	128	144	74.4
Talc.....	148	<i>147</i>	145	140	147	158	157	148	147	147	147	143	143	90.5
Granite.....	105	<i>74</i>	72	79	86	126	136	130	127	110	124	104	82	62.9
Marble.....	105	<i>108</i>	90	96	106	130	116	123	128	125	90	84	65	50.0
Stone, miscellaneous.....	96	<i>23</i>	23	23	33	66	164	172	178	161	147	100	62	13.3
Sand, molding.....	81	<i>17</i>	17	67	86	109	119	115	117	107	110	89	23	14.3
Other industries.....	427	<i>305</i>	378	340	435	465	461	481	463	452	462	458	430	63.4

TABLE 7.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Two of the "Other industries," however, were of greater importance in the State than some of the industries shown separately]

	Total	Limestone <sup>1</sup>	Sand and gravel	Iron ore	Gypsum	Talc
Number of enterprises <sup>2</sup> .....	261	69	62	5	11	3
Number of mines and quarries.....	298	73	69	5	11	4
Persons engaged in industry, total (all classes).....	7,213	2,178	1,500	1,021	779	184
Proprietors and firm members.....	89	11	14	—	—	—
Principal salaried officers of corporations <sup>3</sup> .....	160	40	75	4	4	6
Other salaried officers and employees <sup>4</sup> .....	520	129	177	43	38	30
Wage earners (average for the year).....	6,432	1,998	1,330	974	737	148
Principal expenses:						
Salaries and wages—						
Principal officers of corporations <sup>5</sup> .....	\$1,273,458	\$251,671	\$800,065	\$26,400	\$12,700	\$45,550
Other salaried officers and employees <sup>6</sup> .....	\$1,263,685	\$285,945	\$467,852	\$121,502	\$99,430	\$56,764
Wage earners.....	\$10,029,760	\$3,111,408	\$2,437,209	\$1,410,581	\$1,001,115	\$224,897
Contract work.....	\$106,326	\$7,116	\$8,074	—	\$3,504	—
Supplies.....	\$5,076,105	\$2,025,896	\$802,150	\$801,165	\$285,375	\$394,334
Fuel.....	\$332,562	\$917,527	\$350,039	\$129,672	\$1,237	\$4,368
Purchased electric energy.....	\$1,496,649	\$458,328	\$307,698	\$233,302	\$133,110	\$43,824
Expenditures for development (included above in "Principal expenses").....	\$618,000	\$145,000	—	\$272,000	\$20,000	\$10,000
Value of products.....	\$30,045,204	\$11,389,087	\$11,304,030	\$3,554,606	\$2,092,711	\$1,196,277
Machinery and other equipment purchased during the year, total cost.....	\$1,709,904	\$685,274	\$718,604	\$39,655	\$21,707	\$15,707
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	145,995	42,632	43,250	24,471	7,689	6,035
Prime movers, total horsepower <sup>7</sup> .....	50,113	10,989	22,244	8,000	310	3,065
Steam engines—						
Number.....	337	124	124	6	1	1
Horsepower.....	38,523	9,651	17,350	8,000	250	50
Steam turbines—						
Number.....	5	3	2	—	—	—
Horsepower.....	179	54	125	—	—	—
Internal-combustion engines—						
Number.....	188	37	83	—	1	1
Horsepower.....	8,416	1,204	4,769	—	60	40
Water wheels and water turbines—						
Number.....	10	1	—	—	—	0
Horsepower.....	2,995	—	—	—	—	2,975
Electric motors driven by purchased energy—						
Number.....	2,416	743	552	232	334	59
Horsepower.....	95,882	31,643	21,012	16,471	7,379	3,570
Electric motors driven by energy generated by enterprises reporting:						
Number.....	105	53	6	18	12	4
Horsepower.....	4,091	1,691	115	1,320	61	750
Electric generators: <sup>8</sup>						
Number.....	19	6	2	6	1	1
Kilowatts.....	7,247	1,182	125	5,360	200	250
Fuel and electric energy consumed:						
Fuel—						
Coal—						
Anthracite..... tons, 2,240 pounds.....	12,465	250	7	11,717	18	—
Bituminous..... tons, 2,000 pounds.....	128,517	50,888	53,385	14,009	198	576
Coke..... tons, 2,000 pounds.....	982	720	22	—	—	—
Fuel oils..... gallons.....	1,242,020	16,517	940,169	138,334	—	—
Gasoline and kerosene..... gallons.....	1,260,119	519,224	487,427	21,363	690	6,002
Gas, natural..... M cubic feet.....	597	—	504	—	33	—
Electric energy—						
Purchased..... kw.-hours.....	98,340,949	30,020,085	15,722,612	22,652,619	11,260,383	5,109,061
Generated by enterprises reporting..... kw.-hours.....	7,683,980	3,265,500	900,000	2,413,600	74,880	900,000

See footnotes at end of table.

TABLE 7.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929—Continued

[See note at head of this table]

	Slate	Sandstone	Stone, miscellaneous	Granite	Sand, molding	Marble	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	15	30	15	13	10	9	19
Number of mines and quarries.....	15	41	15	13	23	9	20
Persons engaged in industry, total (all classes).....	177	333	120	121	101	129	474
Proprietors and firm members.....	12	30	6	6	1	2	7
Principal salaried officers of corporations <sup>3</sup> .....	2	8	4	1	0	7	9
Other salaried officers and employees <sup>4</sup> .....	8	19	14	9	13	15	31
Wage earners (average for the year).....	155	276	96	105	81	105	427
Principal expenses:							
Salaries and wages—							
Principal officers of corporations <sup>3</sup> .....	\$1,500	\$31,210	\$4,514	\$1,200	\$40,040	\$9,025	\$47,774
Other salaried officers and employees <sup>4</sup> .....	\$20,590	\$24,812	\$26,533	\$20,157	\$25,740	\$38,037	\$70,223
Wage earners.....	\$227,376	\$348,060	\$139,207	\$133,525	\$112,592	\$141,194	\$685,012
Contract work.....					\$56,021	\$18,225	\$12,786
Supplies.....	\$42,360	\$80,262	\$93,205	\$91,415	\$3,186	\$9,430	\$407,321
Fuel.....	\$6,489	\$19,364	\$2,152	\$17,371	\$5,374	\$11,592	\$27,417
Purchased electric energy.....	\$47,027	\$17,096	\$23,255	\$14,610	\$655	\$24,378	\$133,366
Expenditures for development (included above in "Principal expenses").....	\$2,000	\$22,000	\$49,000	\$23,000		\$5,000	\$70,000
Value of products.....	\$728,642	\$680,875	\$593,467	\$504,519	\$468,397	\$393,586	\$3,138,407
Machinery and other equipment purchased during the year, total cost.....	\$2,560	\$34,716	\$41,211	\$54,351	\$11,440	\$7,525	\$77,094
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	3,120	2,813	3,435	2,826	350	1,707	7,061
Prime movers, total horsepower <sup>5</sup> .....	135	1,520	1,318	1,200	310	390	572
Steam engines—							
Number.....	8	27	18	10	5	11	2
Horsepower.....	113	1,059	643	565	310	390	162
Steam turbines—							
Number.....							
Horsepower.....							
Internal-combustion engines—							
Number.....	1	26	17	15			
Horsepower.....	22	481	675	695			410
Water wheels and water turbines—							
Number.....							
Horsepower.....							
Electric motors driven by purchased energy—							
Number.....	122	43	63	34	2	59	173
Horsepower.....	2,985	1,203	2,117	1,560	40	1,317	6,489
Electric motors driven by energy generated by enterprises reporting:							
Number.....		6					6
Horsepower.....		99					55
Electric generators: <sup>6</sup>							
Number.....		2					1
Kilowatts.....		70					66
Fuel and electric energy consumed:							
Fuel—							
Coal—							
Anthracite..... tons, 2,240 pounds.....	114	110		9			240
Bituminous..... tons, 2,000 pounds.....	755	4,537	310	284	213	2,120	1,236
Coke..... tons, 2,000 pounds.....				40			200
Fuel oils..... gallons.....		21,700	8,100			650	116,559
Gasoline and kerosene..... gallons.....	3,000	29,764		36,370	32,214		74,075
Gas, natural..... M cubic feet.....							
Electric energy—							
Purchased..... kw.-hours.....	2,139,821	748,145	1,937,890	1,085,370	13,100	1,350,718	6,310,145
Generated by enterprises reporting..... kw.-hours.....							130,000

<sup>1</sup> Does not include data for production of 1,956,000 tons for which reports were not received. See Table 4, column 10, in "Stone" report.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>4</sup> Includes 1,095 horsepower for inactive prime movers.

<sup>5</sup> Includes 100 kilowatts for inactive generators.

<sup>6</sup> Abrasive materials, 4 enterprises (emery, 2; garnet, 2); basalt, 2; clay, 5; feldspar, 3; millstones and pulpstones, 2; silica, 2; zinc, 1.

## NORTH CAROLINA

On the basis of the industries canvassed for 1929, North Carolina ranked thirty-seventh among the States in value of mineral products and thirty-fifth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the 1929 figures to exclude data for the sand and gravel industry, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 105.8 per cent greater in 1929 than in 1919. This increase is accounted for principally by the granite and feldspar industries.

Statistics for nonproducing (development only) enterprises are given in Table 2, and are not included in any of the other tables shown.

The corporate form of organization was most important among enterprises in the mining industries in North Carolina in 1929. As shown in Table 3, corporations operated 45.8 per cent of all enterprises, employed 91.6 per cent of the wage earners, and produced 92.7 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises employing wage earners in North Carolina, 88.4 per cent were in classes having not more than 50 wage earners. These

enterprises employed 39.9 per cent of the total number of wage earners and contributed 41.5 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 5, show that the "54 and over but under 63" hours-per-week class predominated, while the "44 and over but under 48" class ranked second. In the granite industry 56.5 per cent of the wage earners were employed less than 54 hours per week, while in the feldspar industry 57.4 per cent were employed 54 hours or more.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 11 enterprises in the 500-999 horsepower group reported 7,624 horsepower, or 36.5 per cent. This group, together with the 250-499 and 1,000-2,499 horsepower groups, accounted for 87.3 per cent of the aggregate.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The granite industry ranked first in the State, accounting for 53.7 per cent of the total value of products. This industry, together with the feldspar industry, produced 69.6 per cent of the total. North Carolina ranked fourth among the States in 1929 in the granite industry and first in the feldspar industry.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919 <sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (-)	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (-)
	1929		1919			1929		1919		
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>			
Number of enterprises <sup>3</sup> .....	118	112	102	0.8						
Number of mines and quarries.....	129	123	106	16.0						
Persons engaged, total.....	2,843	2,692	2,108	27.7						
Proprietors and firm members.....	77	75	90	( <sup>4</sup> )						
Salaried employees.....	\$ 200	\$ 181	128	41.4						
Wage earners (average for the year) <sup>5</sup> .....	2,566	2,436	1,890	28.9						
Power equipment (total horsepower).....	22,348	20,848	5,039	303.8						
					Principal expenses: <sup>7</sup>					
					Salaries.....	\$ 377,866	\$ 441,281	\$ 199,612		121.0
					Wages.....	2,303,570	2,192,732	1,489,062		47.3
					Contract work.....	678	678	5,745		-88.2
					Supplies and materials.....	1,150,887	1,107,474	467,460		186.9
					Fuel.....	223,206	194,437	213,392		-8.9
					Purchased electric energy.....	212,574	194,023	7,339		2,543.7
					Value of products <sup>8</sup> .....	5,981,239	5,631,316	2,736,543		105.8

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

MINES AND QUARRIES—NORTH CAROLINA

TABLE 2.—SUMMARY FOR NONPRODUCING ENTERPRISES: 1929

Number of enterprises.....	5	Principal expenses—Continued.	
Number of mines.....	6	Wages.....	\$18,269
Wage earners (average for the year).....	19	Supplies, fuel, and purchased electric energy.....	16,625
Power equipment (total horsepower).....	110	Expenditures for development (included above in "Principal expenses").....	36,197
Principal expenses:			
Salaries.....	\$7,000		

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	118	129	2,566	\$5,981,230	SAND AND GRAVEL, total.....	6	6	130	\$349,923
Corporations.....	54	65	2,351	5,544,908	Corporations <sup>2</sup> .....	6	6	130	349,923
Other <sup>1</sup> .....	64	64	215	436,331	MICA, total.....	10	15	102	223,804
GRANITE, total.....	67	67	1,396	3,213,624	Corporations.....	7	12	93	200,435
Corporations.....	20	20	1,270	2,970,366	Other <sup>1</sup> .....	3	3	9	23,369
Other <sup>1</sup> .....	47	47	120	234,228					
FELDSPAR, total.....	14	17	305	952,122					
Corporations.....	8	11	245	832,958					
Other <sup>1</sup> .....	6	6	60	119,164					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

<sup>2</sup> Includes 1 other form of organization.

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total <sup>3</sup> .....	112	123	2,566	\$2,308,570	\$5,965,080	FELDSPAR, total.....	14	17	305	\$193,513	\$952,122
1 to 5.....	58	60	123	84,526	267,807	1 to 5.....	6	8	19	11,016	27,175
6 to 20.....	22	27	258	223,435	609,648	6 to 20.....	3	3	39	23,840	102,424
21 to 50.....	19	20	642	544,006	1,506,396	21 to 50.....	4	5	247	158,651	822,523
51 to 100.....	9	9	635	456,633	1,283,261	51 to 100.....	1	1			
101 to 250.....	3	6	968	994,970	2,207,977	SAND AND GRAVEL, total.....	6	6	130	110,838	349,923
251 to 500.....	1	1				1 to 5.....	1	1			
GRANITE, total <sup>3</sup> .....	61	61	1,396	1,298,307	3,197,474	6 to 20.....	3	3	130	110,838	349,923
1 to 5.....	40	40	74	46,736	158,783	21 to 50.....	1	1			
6 to 20.....	4	4	46	54,248	180,730	51 to 100.....	1	1			
21 to 50.....	9	9	308	291,839	742,414	MICA, total.....	10	15	102	70,202	223,804
51 to 100.....	7	7	968	995,574	2,115,577	1 to 5.....	4	4	12	8,122	32,769
251 to 500.....	1	1				6 to 20.....	5	10	90	62,080	191,045
						21 to 50.....	1	1			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>3</sup> Exclusive of 6 enterprises employing no wage earners.

TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in North Carolina was 52, distributed as follows: Gold, 1; granite, 45; limestone, 2; marble, 1; stone, miscellaneous, 3. The combined value of products represented by these enterprises was \$267,004.]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	66	77	2,440	\$2,208,118	\$5,773,335	GRANITE, total <sup>1</sup> .....	22	22	1,326	\$1,254,322	\$3,062,724
Under 25.....	1	1				36 and over but under 40.....	1	1			
36 and over but under 40.....	1	1	104	71,474	171,293	40.....	1	1			
40.....	3	3				44 and over but under 48.....	3	3	740	768,483	1,805,085
44 and over but under 48.....	4	4	558	634,936	1,508,701	Over 48 but under 54.....	2	2			
48.....	11	11	302	318,070	875,513	54 and over but under 63.....	15	15	577	485,839	1,257,639
Over 48 but under 54.....	4	4	261	203,222	398,792	FELDSPAR, total.....	14	17	305	193,513	952,122
54 and over but under 63.....	42	53	1,215	980,416	2,819,036	Under 25.....	1	1			
						40.....	1	1	130	84,764	510,060
						48.....	5	5			
						54 and over but under 63.....	7	10	175	108,759	442,062

<sup>1</sup> See headnote.

TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 52 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 detailed power-equipment information. Of the 60 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 8]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499
Number of enterprises reporting power equipment <sup>1</sup> .....	58	4	10	14	15	11	4
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	20,868	64	482	2,110	5,282	7,624	5,306
Prime movers, total horsepower.....	9,129	49	160	1,050	1,585	4,100	2,095
Steam engines—							
Number.....	85	2	3	11	25	20	24
Horsepower.....	6,534	24	120	645	1,485	2,415	1,845
Internal-combustion engines—							
Number.....	45	1	2	14	4	10	5
Horsepower.....	1,965	10	40	405	100	1,220	190
Water wheels and water turbines—							
Number.....	6	1				3	2
Horsepower.....	630	15				555	60
Horsepower rating of inactive prime movers, included above.....	85		25		60		
Electric motors driven by purchased energy—							
Number.....	332	1	18	32	101	86	94
Horsepower.....	11,739	15	322	1,060	3,697	3,434	3,211
Electric motors driven by energy generated by enterprises reporting:							
Number.....	91				6	73	12
Horsepower.....	1,500				100	1,190	210
Electric generators:							
Number.....	14				2	10	2
Kilowatts.....	1,424				152	1,072	200

<sup>1</sup> See headnote.

<sup>2</sup> See Table 8 for total horsepower rating of power equipment for all enterprises.

TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum is of maximum
		Janu-ary	Febru-ary	March	April	May	June	July	August	Septem-ber	October	Novem-ber	Decem-ber	
All industries, total.....	2,566	2,502	2,440	2,538	2,653	2,750	2,785	2,532	2,069	2,633	2,585	2,456	2,252	80.9
Granite.....	1,396	1,400	1,314	1,366	1,391	1,511	1,529	1,406	1,480	1,431	1,444	1,282	1,202	78.6
Feldspar.....	305	298	277	287	301	299	299	316	323	316	317	366	307	85.0
Sand and gravel.....	130	126	125	130	136	135	137	133	132	129	128	122	121	87.7
Mica.....	102	99	98	98	102	105	101	109	108	108	109	109	80	78.4
Other stones.....	61	69	81	84	95	96	96	34	34	34	34	34	34	34.7
Other industries.....	572	510	545	567	623	604	623	542	591	615	553	583	508	81.5

## MINES AND QUARRIES—NORTH CAROLINA

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Two of the "Other industries," however, were of greater importance in the State than some of the industries shown separately]

	Total	Granite	Feldspar	Sand and gravel	Mica	Other stones <sup>1</sup>	Other industries <sup>2</sup>
Number of enterprises <sup>3</sup> .....	118	67	14	6	10	7	14
Number of mines and quarries.....	129	67	17	6	15	7	17
Persons engaged in industry, total (all classes).....	2,843	1,554	341	151	116	71	610
Proprietors and firm members.....	77	65	2	2	—	8	—
Principal salaried officers of corporations <sup>4</sup> .....	45	28	5	6	7	—	4
Other salaried officers and employees <sup>4</sup> .....	155	70	29	13	7	2	34
Wage earners (average for the year).....	2,566	1,396	305	130	102	61	572
Principal expenses:							
Salaries and wages—							
Principal officers of corporations <sup>4</sup> .....	\$186,187	\$108,112	\$14,050	\$14,500	\$30,075	—	\$18,850
Other salaried officers and employees <sup>4</sup> .....	\$291,179	\$128,787	\$60,198	\$21,635	\$10,280	\$4,200	\$66,104
Wage earners.....	\$2,303,570	\$1,298,897	\$198,513	\$110,838	\$70,202	\$68,859	\$561,761
Contract work.....	\$678	—	\$678	—	—	—	—
Supplies.....	\$1,160,887	\$682,942	\$77,845	\$43,413	\$11,561	\$16,474	\$318,652
Fuel.....	\$223,206	\$101,288	\$8,445	\$28,769	\$6,610	\$8,027	\$69,167
Purchased electric energy.....	\$212,574	\$125,996	\$35,143	\$18,551	\$13,922	—	\$20,952
Expenditures for development (included above in "Principal expenses").....	\$198,000	\$88,000	\$10,000	—	\$5,000	\$12,000	\$88,000
Value of products.....	\$5,981,239	\$3,213,624	\$952,122	\$340,923	\$223,804	\$117,620	\$1,124,146
Machinery and other equipment purchased during the year, total cost.....	\$126,135	\$50,454	\$14,800	\$20,984	\$6,406	—	\$27,491
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	22,348	11,557	2,948	2,000	1,023	810	4,010
Prime movers, total horsepower.....	10,544	4,435	1,295	1,315	285	745	2,469
Steam engines—							
Number.....	156	94	6	12	3	8	33
Horsepower.....	7,949	3,315	670	820	140	745	2,259
Internal-combustion engines—							
Number.....	45	18	10	11	5	—	1
Horsepower.....	1,965	1,060	250	495	130	—	80
Water wheels and water turbines—							
Number.....	6	2	1	—	1	—	2
Horsepower.....	630	60	375	—	15	—	180
Electric motor driven by purchased energy—							
Number.....	334	142	66	21	44	2	59
Horsepower.....	11,804	7,122	1,653	685	738	65	1,541
Electric motors driven by energy generated by enterprises reporting:							
Number.....	91	23	2	—	—	6	60
Horsepower.....	1,500	910	40	—	—	100	450
Electric generators:							
Number.....	14	7	1	—	—	1	5
Kilowatts.....	1,424	622	150	—	—	150	502
Fuel and electric energy consumed:							
Fuel—							
Coal, bituminous..... tons, 2,000 pounds.....	50,462	12,841	698	5,024	1,031	4,463	26,405
Coke..... tons, 2,000 pounds.....	235	—	235	—	—	—	—
Fuel oils..... gallons.....	32,799	65,326	4,481	12,902	—	—	—
Gasoline and kerosene..... gallons.....	327,735	245,080	19,241	50,290	9,324	—	3,800
Electric energy—							
Purchased..... kw.-hours.....	13,127,292	7,718,244	2,306,291	864,875	1,123,372	—	1,108,426
Generated by enterprises reporting..... kw.-hours.....	773,200	673,200	—	—	—	100,000	—

<sup>1</sup> Limestone, 3 enterprises; marble, 1; stone, miscellaneous, 3.

<sup>2</sup> Asbestos, 1 enterprise; clay, 2; coal, bituminous, 1; copper, 2; gold, lode, 2; iron ore, 1; millstones and pulpstones, 1; silica, 1; talc and soapstone, 3.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

## NORTH DAKOTA

On the basis of the industries canvassed for 1929, North Dakota ranked forty-first among the States in value of mineral products and fortieth in number of wage earners employed in mining and quarrying industries.

The production of sand and gravel was reported by one enterprise in North Dakota. In order to avoid disclosure of this operation, the data have been combined with the statistics of that industry for South Dakota. Accordingly, statistics for North Dakota cover only the coal-mining industry. While the value of products for this industry increased 66.4 per cent, the quantity of coal produced increased 141.5 per cent, as shown in Table 1.

The character of organization of the coal-mining enterprises for North Dakota in 1929 is shown in Table 2, which brings out the fact that while corporations conducted only 14.8 per cent of the total number of enterprises, they employed 64.5 per cent of the wage earners, and produced 75.9 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 3 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in North Dakota, 96.5 per cent were in classes having not more than 50 wage earners. These enterprises employed only 53.2 per cent of the total number of wage earners and contributed 40.7 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 4, show that the "48-hour and under" classes predominated.

Table 5 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 3 enterprises in the "1,000 or more" horsepower group reported 6,853 horsepower, or 73.1 per cent.

The statistics for wage earners presented in Table 6, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industry during the census year.

Table 7 presents the 1929 statistics in detail for the coal industry in the State. The coal mined in North Dakota is lignite.

TABLE 1.—SUMMARY FOR BITUMINOUS-COAL (LIGNITE) INDUSTRY: 1929 AND 1919

	1929	1919	Per cent of increase or decrease (-)		1929	1919	Per cent of increase or decrease (-)
Number of enterprises <sup>1</sup> .....	116	79	(?)	Principal expenses: <sup>5</sup> Salaries..... Wages..... Contract work..... Supplies and materials..... Fuel..... Purchased electric energy..... Value of products <sup>6</sup> ..... Quantity of coal produced (tons, 2,000 pounds)	<sup>3</sup> \$167,873	\$159,646	5.2
Number of mines.....	115	79	(?)		\$1,289,376	\$1,029,126	25.3
Persons engaged, total.....	1,175	939	25.1		\$8,746	\$30,750	-71.6
Proprietors and firm members.....	114	75	(?)		\$348,451	\$283,633	22.9
Salaried employees.....	<sup>2</sup> 67	90	(?)		\$49,615	\$32,353	51.0
Wage earners (average for the year).....	994	774	28.4		\$67,931	\$4,841	1,303.2
Power equipment (total horsepower).....	10,310	2,037	406.1		\$3,206,931	\$1,927,304	66.4
					1,853,604	767,695	141.5

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> Per cent not computed where base is less than 100.

<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>4</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>5</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>6</sup> See GENERAL EXPLANATIONS—Value of Products.

TABLE 2.—CHARACTER OF ORGANIZATION, FOR BITUMINOUS-COAL (LIGNITE) INDUSTRY: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines	Wage earners (average for the year)	Value of products
COAL, BITUMINOUS, total.....	115	115	994	\$3,206,931
Corporations.....	17	17	641	2,433,091
Other <sup>1</sup> .....	98	98	353	773,840

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

MINES AND QUARRIES—NORTH DAKOTA

TABLE 3.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR BITUMINOUS-COAL (LIGNITE) INDUSTRY: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
COAL, BITUMINOUS, total.....	115	115	994	\$1,289,376	\$3,200,931
1 to 5.....	94	94	206	218,113	441,439
6 to 20.....	12	12	141	182,172	317,116
21 to 50.....	5	5	182	241,041	546,145
51 to 100.....	2	2	465	647,450	1,903,231
101 to 250.....	2	2			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

TABLE 4.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR BITUMINOUS-COAL (LIGNITE) INDUSTRY: 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 prevailing hours of labor. The number of enterprises in this class in North Dakota was 98, with a total value of products of \$493,048]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines	Wage earners (average for the year)	Wages	Value of products
COAL, BITUMINOUS, total <sup>1</sup> .....	17	17	757	\$1,039,201	\$2,708,283
25 and over but under 36.....	1	1	497	663,194	1,267,573
40.....	1	1			
48.....	10	10	260	376,097	1,440,710
54 and over but under 63.....	4	4			
63 and over.....	1	1			

<sup>1</sup> See headnote.

TABLE 5.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT, FOR BITUMINOUS-COAL (LIGNITE) INDUSTRY: 1929

[This table does not include data for 98 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 detailed power-equipment information. Of the 17 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 1]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—				TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					
		Less than 100	100 to 249	250 to 999 <sup>1</sup>	1,000 or more			Less than 100	100 to 249	250 to 999 <sup>1</sup>	1,000 or more		
Number of enterprises reporting power equipment.....	10	5	5	3	3	Prime movers, etc.—Continued.							
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	9,370	115	769	1,633	6,853	Horsepower rating of inactive prime movers, included above.....	517	67					450
Prime movers, total horsepower.....	4,138	75	532	803	2,728	Electric motors driven by purchased energy—							
Steam engines—						Number.....	184	4	17	28			135
Number.....	33	2	11	13	7	Horsepower.....	5,232	40	237	830			4,125
Horsepower.....	3,012	35	522	755	1,700	Electric motors driven by energy generated by enterprises reporting:							
Internal-combustion engines—						Number.....	26	5	6	15			
Number.....	28	4	1	3	20	Horsepower.....	403	100	93	210			
Horsepower.....	1,126	40	10	48	1,028	Electric generators:							
						Number.....	8	1	2	2			3
						Kilowatts.....	702	20	82	150			460

<sup>1</sup> Includes the group "500 to 999."

MINES AND QUARRIES—NORTH DAKOTA

189

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR BITUMINOUS-COAL (LIGNITE) INDUSTRY: 1929

[The month of maximum employment 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum is of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
Coal, bituminous, total	994	1,280	1,142	1,044	699	<i>665</i>	689	708	743	1,095	1,277	1,327	1,303	50.1

TABLE 7.—DETAILED STATISTICS FOR BITUMINOUS-COAL (LIGNITE) INDUSTRY: 1929

Number of enterprises <sup>1</sup>	115	Prime movers and electric motors driven by purchased energy—Con.	
Number of mines	115	Prime movers—Continued.	
Persons engaged in industry, total (all classes)	1,175	Steam engines—	83
Proprietors and firm members	114	Number	3,892
Principal salaried officers of corporations <sup>2</sup>	7	Horsepower	
Other salaried officers and employees <sup>2</sup>	60	Internal-combustion engines—	28
Wage earners (average for the year)	994	Number	1,126
Principal expenses:		Horsepower	
Salaries and wages—		Electric motors driven by purchased energy—	188
Principal officers of corporations <sup>2</sup>	\$32,320	Number	5,292
Other salaried officers and employees <sup>2</sup>	\$135,558	Horsepower	
Wage earners	\$1,289,376	Electric motors driven by energy generated by enterprises reporting:	26
Contract work	\$8,746	Number	408
Supplies	\$348,451	Horsepower	
Fuel	\$49,615	Electric generators: <sup>4</sup>	8
Purchased electric energy	\$87,931	Number	702
Expenditures for development (included above in "Principal expenses")	\$65,000	Kilowatts	
Value of products	\$3,206,931	Fuel and electric energy consumed:	
Machinery and other equipment purchased during the year, total cost	\$80,478	Fuel—	39,716
Prime movers and electric motors driven by purchased energy, aggregate horsepower	10,310	Coal, bituminous	tons, 2,000 pounds
Prime movers, total horsepower <sup>3</sup>	5,018	Coke	tons, 2,000 pounds
		Fuel oils	gallons
		Gasoline and kerosene	gallons
		Gas, manufactured	M cubic feet
		Electric energy—	
		Purchased	kw.-hours
		Generated by enterprises reporting	kw.-hours

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>3</sup> Includes 517 horsepower for inactive prime movers.

<sup>4</sup> Includes 485 kilowatts for inactive generators.

# OHIO

On the basis of the industries canvassed for 1929, Ohio ranked tenth among the States in value of mineral products and sixth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for all industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 41.9 per cent less in 1929 than in 1919. This decrease is accounted for principally by the decline in the production and value of bituminous coal, for which comparative figures are given in Table 2.

The industries reported for 1929, ranked according to value of products, are shown in Table 3. Although its production was much less in 1929 than in 1919, the coal industry ranked first in the State, accounting for 61.4 per cent of the total product. This industry, together with the limestone and the sand and gravel industries, produced 93 per cent of the total. Ohio ranked sixth among the States in 1929 in the coal industry, third in the limestone industry, and fifth in the sand and gravel industry.

The corporate form of organization was most important among enterprises in the mining industries in Ohio in 1929. As shown in Table 4, corporations operated 49.1 per cent of all enterprises, employed 88.6 per cent of the wage earners, and produced 90.4 per cent of the total value of products. Other forms of organization

include partnerships, enterprises operated by individuals, etc.

Table 5 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in Ohio, 86.1 per cent were in classes having not more than 50 wage earners. These enterprises employed only 27.3 per cent of the total number of wage earners and contributed 38.1 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 6, show that the 48-hour week predominated, while the "54 and over but under 63" class ranked second. In the bituminous-coal industry 85.9 per cent of the wage earners were in the 48-hour-week class. In the limestone and the sand and gravel industries the longer working week predominated.

Table 7 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 44 enterprises in the 1,000-2,499 horsepower group reported 66,462 horsepower, or 30.6 per cent. This amount, together with 54,089 horsepower reported by 79 enterprises in the next smaller group, represents 55.5 per cent of the total shown.

The statistics for wage earners presented in Table 8, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 9 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)
	1929		1919 <sup>2</sup>			1929		1919 <sup>2</sup>	
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>3</sup> .....	801	704	950	-25.9	Principal expenses: <sup>4</sup>				
Number of mines and quarries.....	864	744	1,064	-30.1	Salaries.....	\$3,191,066	\$2,345,171	\$5,937,306	-60.5
Persons engaged, total.....	28,846	27,037	47,664	-43.3	Wages.....	31,350,700	29,117,030	51,706,625	-43.8
Proprietors and firm members.....	593	577	721	-20.0	Contract work.....	169,453	137,286	517,018	-73.4
Salaried employees.....	41,252	4960	2,768	-65.3	Supplies and materials.....	6,970,667	6,063,451	10,919,447	-44.5
Wage earners (average for the year) <sup>5</sup> .....	27,001	25,500	44,175	-42.3	Fuel.....	1,056,825	796,253	2,101,240	-62.1
Power equipment (total horsepower).....	228,121	182,003	184,271	-1.2	Purchased electric energy.....	2,377,373	1,893,783	1,106,925	61.9
					Value of products <sup>7</sup> .....	60,095,705	51,757,468	89,034,980	-41.9

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

MINES AND QUARRIES—OHIO

TABLE 2.—SUMMARY FOR BITUMINOUS-COAL INDUSTRY: 1929 AND 1919

	1929	1919	Percent of increase or decrease (-)		1929	1919	Percent of increase or decrease (-)
Number of enterprises <sup>1</sup> .....	536	788	-32.0	Value of products, total.....	\$36,916,271	\$77,988,602	-52.7
Number of mines.....	561	898	-37.5	Coal:			
Wage earners (average for the year) <sup>2</sup> .....	21,739	40,452	-46.3	Quantity (tons, 2,000 pounds).....	24,092,000	35,141,000	-31.4
Power equipment (total horsepower).....	112,977	136,025	-16.0	Value at mine.....	\$36,912,000	\$77,778,000	-52.5
Principal expenses: <sup>3</sup>				Other products.....	\$4,000	\$211,000	-98.1
Salaries.....	\$1,478,640	\$5,103,097	-71.0				
Wages.....	\$24,446,839	\$47,748,048	-48.8				
Contract work.....	\$89,095	\$371,063	-70.0				
Supplies and materials.....	\$3,894,114	\$9,105,833	-57.2				
Fuel.....	\$244,611	\$1,433,483	-82.9				
Purchased electric energy.....	\$1,173,371	\$925,302	26.8				

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise. <sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged. <sup>3</sup> See GENERAL EXPLANATIONS—Expenses.  
<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—PRINCIPAL INDUSTRIES RANKED IN ORDER OF VALUE OF PRODUCTS: 1929

INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products	INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products
All industries, total.....	801	804	27,001	\$60,095,705	Sand, molding.....	22	34	373	\$1,333,554
Coal, bituminous.....	536	561	21,739	36,916,271	Sandstone.....	14	17	447	1,186,128
Limestone.....	110	114	2,660	12,091,055	Clay.....	19	22	176	457,006
Sand and gravel.....	73	84	1,103	6,833,570	Other industries <sup>3</sup> .....	27	32	503	1,247,512

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise. <sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>3</sup> Abrasive materials, 6 enterprises; gypsum, 3; millstones and pulpstones, 2; sand, glass, 2; silica, 3; stone, miscellaneous, 11.

TABLE 4.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	801	804	27,001	\$60,095,705	SAND AND GRAVEL, total.....	73	84	1,103	\$6,833,570
Corporations.....	393	438	23,013	54,327,572	Corporations.....	60	68	1,025	6,290,811
Other <sup>1</sup> .....	408	420	3,088	5,768,133	Other <sup>1</sup> .....	13	16	78	506,708
COAL, BITUMINOUS, total.....	536	561	21,739	36,916,271	SAND, MOLDING, total.....	22	34	373	1,333,554
Corporations.....	208	229	19,094	32,774,017	Corporations.....	16	25	324	1,217,935
Other <sup>1</sup> .....	328	332	2,645	4,142,254	Other <sup>1</sup> .....	6	9	49	115,619
LIMESTONE, total.....	110	114	2,660	12,091,055	SANDSTONE, total.....	14	17	447	1,186,128
Corporations.....	73	78	2,491	11,409,677	Corporations.....	14	17	447	1,186,128
Other <sup>1</sup> .....	37	38	169	591,378					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

TABLE 5.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>(1)</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>(1)</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	801	804	27,001	\$31,350,700	\$60,095,705	LIMESTONE, total.....	110	114	2,660	\$3,408,676	\$12,091,055
1 to 5.....	324	326	925	997,708	2,475,534	1 to 5.....	41	41	130	166,354	516,683
6 to 20.....	255	276	2,919	3,424,100	8,031,658	6 to 20.....	31	32	418	516,725	1,737,031
21 to 50.....	111	122	3,530	4,470,576	12,344,429	21 to 50.....	27	27	515	1,116,454	4,436,043
51 to 100.....	48	59	3,450	3,834,383	7,388,917	51 to 100.....	8	9	615	739,996	2,043,262
101 to 250.....	40	48	6,207	7,170,231	13,046,210	101 to 250.....	2	4	676	897,147	3,257,406
251 to 500.....	16	18	5,362	6,131,019	9,365,265	251 to 500.....	1	1			
501 to 1,000.....	7	15	4,608	5,322,683	7,390,689	SAND AND GRAVEL, total.....	73	84	1,103	1,787,498	6,833,570
COAL, BITUMINOUS, total.....	536	561	21,739	24,446,839	36,916,271	1 to 5.....	21	22	80	168,188	654,215
1 to 5.....	234	284	681	598,461	1,063,697	6 to 20.....	36	42	352	581,155	2,375,430
6 to 20.....	168	163	1,771	1,920,988	2,954,103	21 to 50.....	13	16	436	687,755	2,097,714
21 to 50.....	62	65	1,721	2,017,342	3,243,833	51 to 100.....	2	3	229	360,400	1,136,220
51 to 100.....	34	38	2,409	2,559,341	4,174,632	101 to 250.....	1	1			
101 to 250.....	36	39	5,490	6,152,328	9,301,374	SANDSTONE, total.....	14	17	447	520,032	1,186,128
251 to 500.....	15	17	5,109	5,899,696	8,787,923	6 to 20.....	8	8	121	133,893	266,203
501 to 1,000.....	7	15	4,608	5,322,683	7,360,689	21 to 50.....	5	5	326	386,189	919,925
						101 to 250.....	1	4			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

MINES AND QUARRIES—OHIO

TABLE 6.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Ohio was 361, distributed as follows: Coal, bituminous, 339; limestone, 12; stone, miscellaneous, 10. The combined value of products represented by these enterprises was \$2,549,880]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	440	503	25,282	\$29,699,834	\$57,545,825	COAL, BITUMINOUS—Continued					
Under 25.....	5	5	264	185,036	255,595	44 and over but under 48.....	13	13	768	\$1,020,146	\$1,849,639
25 and over but under 30.....	6	6	204	328,608	467,620	48.....	146	168	17,240	19,415,001	28,493,885
30 and over but under 40.....	2	2	638	575,890	980,643	54 and over but under 63.....	11	14	508	876,269	1,745,024
40.....	15	15	634	652,163	1,365,882	LIMESTONE, total <sup>1</sup> .....	98	102	2,024	3,367,234	11,073,452
Over 40 but under 44.....	3	3	1,204	1,511,677	2,790,025	48.....	6	7	116	166,084	356,725
44 and over but under 48.....	24	28	17,634	19,893,086	29,445,099	Over 48 but under 54.....	8	8	135	157,921	442,108
48.....	175	205	222	230,079	900,489	54 and over but under 63.....	84	87	2,373	3,043,229	11,174,019
Over 48 but under 54.....	19	19	4,625	6,236,879	20,893,586	SAND AND GRAVEL, total.....	73	84	1,103	1,787,498	6,863,579
54 and over but under 63.....	187	216	77	116,416	386,967	Over 40 but under 44.....	2	2	100	176,401	587,109
63 and over.....	4	6				44 and over but under 48.....	1	1	48	76,178	209,762
COAL, BITUMINOUS, total <sup>1</sup> .....	197	222	20,073	22,855,162	34,449,828	48.....	7	8	51	90,024	384,605
Under 25.....	5	5	264	185,036	255,595	Over 48 but under 54.....	8	8	862	1,368,998	5,297,899
25 and over but under 30.....	6	6	204	328,608	467,620	54 and over but under 63.....	52	61	852	85,902	324,704
30 and over but under 40.....	2	2	638	575,890	980,643	63 and over.....	3	4	52		
40.....	13	13	640	1,030,102	1,737,406						
Over 40 but under 44.....	1	1									

<sup>1</sup> See headnote.

TABLE 7.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 361 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 detailed power-equipment information. Of the 440 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 36]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSE-POWER OF—							
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	5,000 to 9,999
Number of enterprises reporting power equipment <sup>1</sup> .....	404	13	71	113	72	79	44	9	3
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	217,354	171	4,869	18,115.	25,029	54,089	66,462	31,507	17,112
Prime movers, total horsepower.....	78,385	58	1,837	8,590	6,777	16,794	24,731	11,418	8,130
Steam engines—									
Number.....	524	1	31	90	63	112	153	65	9
Horsepower.....	61,583	20	1,133	5,408	4,530	12,137	23,337	11,168	3,800
Steam turbines—									
Number.....	4				2				2
Horsepower.....	4,420				90				4,330
Internal-combustion engines—									
Number.....	196	6	21	47	39	49	30	5	
Horsepower.....	12,382	38	704	3,182	2,157	4,757	1,394	250	
Horsepower rating of inactive prime movers, included above.....	2,750		10	175	150	282	50	1,183	900
Electric motors driven by purchased energy—									
Number.....	3,906	21	149	378	622	1,079	1,012	460	185
Horsepower.....	138,969	113	2,982	9,525	18,252	37,295	41,731	20,089	8,982
Electric motors driven by energy generated by enterprises reporting.....									
Number.....	540		17	129	23	163	80	77	51
Horsepower.....	16,691		598	2,580	715	5,663	2,555	2,200	2,440
Electric generators:									
Number.....	77		5	18	7	22	8	10	7
Kilowatts.....	11,167		545	1,905	726	3,017	1,200	1,850	1,925

<sup>1</sup> See headnote.

<sup>2</sup> See Table 9 for total horsepower rating of power equipment for all enterprises.

TABLE 8.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.....	27,001	<b>25,672</b>	<b>26,524</b>	<b>27,047</b>	<b>25,794</b>	<i>25,271</i>	26,192	26,671	27,695	28,115	28,792	28,575	27,669	87.8
Coal, bituminous.....	21,739	<b>21,933</b>	<b>22,746</b>	<b>22,670</b>	<b>20,263</b>	<i>19,558</i>	20,196	20,821	21,696	22,052	22,866	23,211	23,162	84.2
Limestone.....	2,600	<b>1,958</b>	<b>1,981</b>	<b>2,270</b>	<b>2,637</b>	<i>2,884</i>	3,001	3,067	3,126	3,112	2,973	2,658	2,281	62.5
Sand and gravel.....	1,103	<b>761</b>	<b>732</b>	<b>890</b>	<b>1,147</b>	<i>1,200</i>	1,269	1,283	1,334	1,302	1,274	1,119	893	57.0
Sandstone.....	447	<b>342</b>	<b>323</b>	<b>413</b>	<b>683</b>	<i>490</i>	515	531	443	436	442	421	516	46.3
Sand, molding.....	373	<b>175</b>	<b>174</b>	<b>213</b>	<b>417</b>	<i>443</i>	443	445	449	460	473	438	319	36.9
Abrasive materials.....	193	<b>105</b>	<b>127</b>	<b>140</b>	<b>176</b>	<i>203</i>	232	231	239	241	239	201	187	43.5
Gypsum.....	182	<b>180</b>	<b>135</b>	<b>132</b>	<b>187</b>	<i>192</i>	180	187	187	186	180	172	170	88.5
Clay.....	176	<b>159</b>	<b>155</b>	<b>164</b>	<b>155</b>	<i>174</i>	184	162	171	188	204	209	202	65.5
Other industries.....	128	<b>84</b>	<b>86</b>	<b>96</b>	<b>129</b>	<i>132</i>	133	144	160	138	142	146	139	54.9

# MINES AND QUARRIES—OHIO

193

TABLE 9.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Each of the "Other industries," however, was of greater importance in the State than one of the industries shown separately]

	Total	Coal, bituminous	Limestone <sup>1</sup>	Sand and gravel	Sand, molding	Sandstone	Clay	Gypsum	Abrasive materials <sup>2</sup>	Stone, miscellaneous	Other industries <sup>3</sup>
Number of enterprises <sup>4</sup> .....	801	530	110	73	22	14	10	3	0	11	7
Number of mines and quarries.....	864	561	114	84	34	17	22	3	11	11	7
Persons engaged in industry, total (all classes).....	28,840	22,868	2,948	1,341	430	480	208	100	214	33	119
Proprietors and firm members.....	593	504	48	13	3	—	12	—	3	10	—
Principal salaried officers of corporations <sup>5</sup> .....	260	111	34	66	28	5	9	—	4	—	3
Other salaried officers and employees <sup>6</sup> .....	992	514	206	159	32	37	11	8	14	2	9
Wage earners (average for the year).....	27,001	21,799	2,660	1,103	373	447	176	182	198	21	107
Principal expenses:											
Salaries and wages—											
Principal officers of corporations <sup>5</sup> .....	\$1,085,804	\$404,576	\$165,359	\$284,960	\$134,926	\$35,100	\$27,558	—	\$24,560	—	\$8,760
Other salaried officers and employees <sup>6</sup> .....	\$2,105,262	\$1,074,095	\$464,899	\$341,368	\$70,475	\$83,180	\$15,768	\$15,407	\$14,100	\$2,000	\$24,000
Wage earners.....	\$31,350,700	\$24,446,839	\$3,406,676	\$1,787,498	\$408,907	\$520,032	\$193,250	\$249,367	\$179,719	\$23,747	\$139,569
Contract work.....	\$166,453	\$80,095	\$42,616	\$19,967	\$12,200	\$5,575	—	—	—	—	—
Supplies.....	\$6,970,667	\$3,894,114	\$1,708,371	\$749,158	\$117,831	\$288,574	\$50,908	\$70,499	\$21,360	\$14,534	\$55,223
Fuel.....	\$1,056,825	\$244,611	\$494,930	\$210,858	\$46,871	\$37,424	\$8,146	\$19,412	\$14,096	\$2,300	\$9,127
Purchased electric energy.....	\$2,377,873	\$1,173,371	\$660,987	\$447,064	\$28,584	\$31,002	\$13,132	\$4,627	—	\$1,300	\$17,236
Expenditures for development (included above in "Principal expenses").....	\$321,000	\$199,000	\$14,000	—	\$1,000	\$73,000	\$14,000	\$6,000	\$12,000	\$2,000	—
Value of products.....	\$60,095,705	\$36,916,271	\$12,091,056	\$6,863,579	\$1,333,554	\$1,186,128	\$467,606	\$397,863	\$389,387	\$86,721	\$373,541
Machinery and other equipment purchased during the year, total cost.....	\$2,201,751	\$1,043,889	\$529,519	\$455,001	\$110,033	\$1,275	\$38,110	\$6,380	—	—	\$10,944
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	228,121	112,977	57,726	40,886	5,042	6,426	1,251	934	948	550	1,381
Prime movers, total horsepower <sup>7</sup> .....	89,510	31,751	24,563	17,739	3,233	3,322	497	810	948	337	250
Steam engines—											
Number.....	658	258	165	131	29	30	5	1	25	13	1
Horsepower.....	66,708	27,633	16,831	14,552	2,565	3,250	391	210	669	327	250
Steam turbines—											
Number.....	4	—	2	—	2	—	—	—	—	—	—
Horsepower.....	4,420	—	4,330	—	90	—	—	—	—	—	—
Internal-combustion engines—											
Number.....	196	46	61	48	21	2	5	4	8	1	—
Horsepower.....	12,382	4,118	3,402	3,157	578	132	106	600	279	10	—
Electric motors driven by purchased energy—											
Number.....	4,137	2,346	907	606	92	85	32	15	—	12	42
Horsepower.....	144,611	81,226	33,163	23,147	1,809	3,044	754	124	—	213	1,131
Electric motors driven by energy generated by enterprises reporting:											
Number.....	540	472	9	12	—	6	—	41	—	—	—
Horsepower.....	16,691	14,587	225	580	—	195	—	1,104	—	—	—
Electric generators: <sup>7</sup>											
Number.....	77	63	4	4	—	1	—	5	—	—	—
Kilowatts.....	11,167	9,935	305	345	—	72	—	510	—	—	—
Fuel and electric energy consumed:											
Fuel—											
Coal—											
Anthracite..... tons, 2,240 pounds.....	380	—	85	304	—	—	—	—	—	—	—
Bituminous..... tons, 2,000 pounds.....	380,609	151,544	136,766	52,293	12,311	13,763	2,563	3,264	3,974	400	3,731
Coke..... tons, 2,000 pounds.....	465	—	10	—	200	—	—	255	—	—	—
Fuel oils..... gallons.....	927,533	425,825	185,694	251,520	22,760	9,734	—	32,000	—	—	—
Gasoline and kerosene..... gallons.....	850,871	73,440	494,856	195,112	29,202	1,318	19,835	49,608	15,000	2,000	—
Gas, natural..... M cubic feet.....	20,163	—	12,300	2,592	3,471	—	—	1,800	—	—	—
Electric energy—											
Purchased..... kw.-hours.....	125,155,527	59,620,756	37,783,327	22,606,557	1,740,860	1,398,164	534,535	238,793	—	92,198	1,140,338
Generated by enterprises reporting..... kw.-hours.....	8,172,100	3,701,030	110,000	465,000	—	118,220	—	3,787,850	—	—	—

<sup>1</sup> Data for several limestone enterprises not included. See "Stone" report, Table 4, p. 332.  
<sup>2</sup> Grindstones.  
<sup>3</sup> Millstones and pulpstones, 2 enterprises; sand, glass, 2; silica, 3.  
<sup>4</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.  
<sup>6</sup> Includes 2,760 horsepower for inactive prime movers.  
<sup>7</sup> Includes 780 kilowatts for inactive generators.

# OKLAHOMA

On the basis of the industries canvassed for 1929, Oklahoma ranked eighteenth among the States in value of mineral products and seventeenth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 8.3 per cent less in 1929 than in 1919. This decrease is accounted for principally by the decline in the value of products of the bituminous-coal and lead and zinc mining industries for which comparative figures are given in Table 2. The decrease in these industries was partly offset by the increase in the limestone industry, from \$567,288 in 1919 to \$1,775,772 in 1929. These figures are not strictly comparable due to inclusion for 1929 of data for limestone produced in connection with cement manufacture which accounted for a relatively small percentage of the total.

The corporation was the dominant form of organization among enterprises in the mining industries in Oklahoma in 1929. As shown in Table 3, corporations operated 72.8 per cent of all enterprises, employed 83.4 per cent of the wage earners, and produced 81.7 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in Oklahoma, 69.1 per cent were in classes having not more than 50 wage earners. These enterprises employed 25.9 per cent of the total number of wage earners and contributed 26.1 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 5, show that the 48-hour week predominated, while the "54 and over but under

63" class ranked second. In the bituminous-coal industry about 80 per cent of the wage earners were employed 48 hours per week.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 45 enterprises in the 500-999 horsepower group reported 31,535 horsepower, or 30.2 per cent, while all enterprises reporting 500 or more accounted for 82,775 horsepower, or 79.2 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The zinc-mining industry ranked first in the State, accounting for 49.8 per cent of the total value of products. This industry, together with the bituminous-coal industry, produced 82.4 per cent of the total. Oklahoma ranked first among the States in 1929 in the zinc-mining industry, accounting for 36.8 per cent of the total value of products for this industry in the United States.

The value of products of the lead and zinc mining industries is the selling value at the point of production of the ores or concentrates. In those instances in which the products were smelted, or smelted and refined by the producing companies, an estimate of the value of the ore or concentrates was reported. The smelting and refining operations and the value of the metals—the final products—are reported by the census of manufactures.

The classification of metal mines, by industries, was determined by the metal of chief value. Therefore, the value of products of the lead-mining industry, for example, represents the value of products for those enterprises classified in that industry, and does not include the mine value of lead contained in the ore or concentrates produced by other metal-mining industries.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (-)	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (-)
	1929			1919 <sup>2</sup>		1929			1919 <sup>2</sup>	
	All industries	Revised (for comparative purposes) <sup>3</sup>				All industries	Revised (for comparative purposes) <sup>3</sup>			
Number of enterprises <sup>4</sup> .....	217	196	235	-16.0						
Number of mines and quarries.....	281	245	284	-13.7						
Persons engaged, total.....	11,018	10,711	14,477	-26.0						
Proprietors and firm members.....	99	64	126	-49.2						
Salaried employees.....	4,674	4,600	1,617	-62.9						
Wage earners (average for the year) <sup>5</sup> .....	10,278	10,047	12,734	-21.1						
Power equipment (total horsepower).....	106,345	98,481	94,989	3.7						
Principal expenses: <sup>6</sup>										
Salaries.....	\$1,933,974	\$1,658,322	\$1,746,985	-5.1						
Wages.....	13,616,561	13,317,998	10,059,762	-17.1						
Contract work.....	255,089	255,089	280,539	-11.0						
Supplies and materials.....	5,572,289	5,442,746	5,859,933	-7.1						
Fuel.....	620,879	563,297	1,452,834	-61.2						
Purchased electric energy.....	1,430,626	1,335,466	859,142	55.4						
Value of products <sup>7</sup> .....	33,139,080	31,559,649	34,430,282	-8.3						

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

# MINES AND QUARRIES—OKLAHOMA

195

**TABLE 2.—SUMMARY FOR LEAD AND ZINC MINING AND FOR BITUMINOUS-COAL INDUSTRIES: 1929 AND 1919**

	LEAD AND ZINC		COAL, BITUMINOUS		PER CENT OF INCREASE OR DECREASE (—)	
	1929	1919	1929	1919	Lead and zinc	Coal, bituminous
Number of enterprises <sup>1</sup> .....	63	111	97	94	-43.2	(?)
Number of mines.....	93	123	113	131	-24.4	-13.7
Wage earners (average for the year) <sup>2</sup> .....	4,507	5,253	4,716	7,040	-14.2	-33.0
Power equipment (total horsepower).....	61,839	55,182	27,789	36,483	12.1	-23.8
Principal expenses: <sup>4</sup>						
Salaries.....	\$876,653	\$684,469	\$577,102	\$932,342	28.1	-38.1
Wages.....	6,037,369	6,908,259	\$6,392,491	\$8,789,936	-12.6	-27.3
Contract work.....	242,088	228,399	\$1,824	\$68,140	6.0	-96.9
Supplies and materials.....	3,523,772	4,218,142	\$1,384,565	\$1,301,771	-16.3	-0.5
Fuel.....	353,083	733,285	\$125,131	\$636,314	-51.8	-30.3
Purchased electric energy.....	904,593	743,944	\$293,373	\$112,573	21.6	160.6
Value of products <sup>6</sup> .....	18,027,077	18,979,726	\$10,789,776	\$14,477,317	-5.0	-25.5
Quantity (tons, 2,000 pounds).....			3,795,174	3,782,794		0.3

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> Per cent not computed where base is less than 100.  
<sup>3</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>4</sup> See GENERAL EXPLANATIONS—Expenses.  
<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.  
<sup>6</sup> See GENERAL EXPLANATIONS—Value of Products.

**TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929**

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	217	281	10,278	\$33,139,030	LIMESTONE, total.....	18	21	507	\$1,775,772
Corporations.....	158	208	8,667	27,068,492	Corporations.....	15	18	454	1,636,096
Other <sup>1</sup> .....	59	73	1,711	6,070,538	Other <sup>1</sup> .....	3	3	53	139,676
ZINC, total.....	57	87	4,117	16,513,953	SAND AND GRAVEL, total.....	21	36	231	1,579,431
Corporations.....	45	67	3,253	12,699,272	Corporations.....	15	26	188	1,258,140
Other <sup>1</sup> .....	12	20	864	3,819,681	Other <sup>1</sup> .....	6	10	43	\$21,291
COAL, BITUMINOUS, total.....	97	113	4,716	10,789,776	LEAD, total.....	6	6	300	1,508,124
Corporations.....	67	81	4,021	9,186,605	Corporations.....	6	6	390	1,508,124
Other <sup>1</sup> .....	30	32	695	1,603,171					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

**TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929**

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	217	281	10,278	\$13,616,561	\$33,139,030	ZINC—Continued					
1 to 5.....	27	30	89	181,645	447,959	21 to 50.....	12	13	395	\$574,981	\$1,876,875
6 to 20.....	73	81	848	1,022,578	2,977,051	51 to 100.....	17	19	1,196	1,639,761	5,496,054
21 to 50.....	50	62	1,728	2,120,034	5,224,451	101 to 250.....	6	9	2,334	3,024,851	8,309,686
51 to 100.....	45	54	3,167	4,117,515	10,575,337	251 to 500.....	4	27			
101 to 250.....	17	24	2,300	3,115,062	6,967,721	LIMESTONE, total.....	18	21	507	\$21,934	1,775,772
251 to 500.....	4	27	2,080	3,109,727	6,956,561	1 to 5.....	1	1	107	104,405	363,401
501 to 1,000.....	1	3				6 to 20.....	8	11	400	417,529	1,412,371
COAL, BITUMINOUS, total.....	97	113	4,716	6,392,491	10,789,776	21 to 50.....	6	6	390	528,097	1,508,124
1 to 5.....	11	11	38	39,367	62,228	51 to 100.....	3	3	110	150,174	392,169
6 to 20.....	30	30	342	407,677	652,645	101 to 250.....	2	2	280	377,923	1,115,955
21 to 50.....	24	27	833	939,503	1,511,050	251 to 500.....	1	1			
51 to 100.....	21	28	1,508	1,924,763	3,303,204	SAND AND GRAVEL, total.....	21	36	231	298,563	1,579,431
101 to 250.....	10	14	1,995	3,031,181	5,260,649	1 to 5.....	8	11	30	69,400	309,421
251 to 1,000.....	1	3				6 to 20.....	11	15	201	229,163	1,270,010
ZINC, total.....	67	87	4,117	5,509,272	16,513,953	21 to 50.....	2	10			
1 to 5.....	3	3	11	8,685	28,212						
6 to 20.....	15	16	181	261,004	803,123						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

MINES AND QUARRIES—OKLAHOMA

TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Oklahoma was 38, distributed as follows: Coal, bituminous, 30; granite, 3; limestone, 3; sandstone, 1; zinc, 1. The combined value of products represented by these enterprises was \$411,919]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup>	179	243	10,010	\$13,353,383	\$32,727,161	LIMESTONE, total <sup>1</sup>	15	18	480	\$497,851	\$1,740,851
Under 25	3	4	77	63,349	91,980	48	2	2	480	497,851	1,740,851
25 and over but under 36	5	8	330	494,905	798,080	54 and over but under 63	12	15			
36 and over but under 40	3	3	87	136,525	288,814	63 and over	1	1			
40	3	6	69	113,010	346,113	LEAD, total	6	6	300	528,097	1,508,124
44 and over but under 48	4	4	92	115,614	20,468,556	48	4	4	300	528,097	1,508,124
48	89	124	6,765	9,071,373	99,925	54 and over but under 63	2	2			
Over 48 but under 54	3	3	28	29,209	9,736,405	SAND AND GRAVEL, total	21	36	231	208,563	1,579,431
54 and over but under 63	59	81	2,371	3,105,514	556,740	25 and over but under 36	1	2	10	25,520	166,479
63 and over	10	11	201	222,883	556,740	40	1	3			
COAL, BITUMINOUS, total <sup>1</sup>	67	83	4,499	6,173,601	10,451,715	44 and over but under 48	1	1			
Under 25	3	4	77	63,349	91,980	48	3	11	78	84,520	372,764
25 and over but under 36	4	6	332	488,905	773,985	54 and over but under 63	2	2			
36 and over but under 40	2	2	127	204,103	313,354	Over 48 but under 54	2	2	134	188,523	1,040,183
40	2	2	1	3,618	5,021,270	63 and over	13	17			
44 and over but under 48	1	1	1	345	395,974	ZINC, total <sup>1</sup>	56	83	4,113	5,504,602	16,510,562
48	49	60	3,618	5,021,270	8,222,761	36 and over but under 40	1	1	2,814	3,697,737	11,061,650
54 and over but under 63	5	6	345	395,974	1,049,635	48	20	45			
63 and over	1	2	1	2,814	3,697,737	54 and over but under 63	20	34	1,239	1,720,844	5,118,447
COAL, BITUMINOUS, total <sup>1</sup>	67	83	4,499	6,173,601	10,451,715	63 and over	6	6			
Under 25	3	4	77	63,349	91,980	36 and over but under 40	1	1	2,814	3,697,737	11,061,650
25 and over but under 36	4	6	332	488,905	773,985	48	20	45			
36 and over but under 40	2	2	127	204,103	313,354	54 and over but under 63	20	34	1,239	1,720,844	5,118,447
40	2	2	1	3,618	5,021,270	63 and over	6	6			
44 and over but under 48	1	1	1	345	395,974	ZINC, total <sup>1</sup>	56	83	4,113	5,504,602	16,510,562
48	49	60	3,618	5,021,270	8,222,761	36 and over but under 40	1	1	2,814	3,697,737	11,061,650
54 and over but under 63	5	6	345	395,974	1,049,635	48	20	45			
63 and over	1	2	1	2,814	3,697,737	54 and over but under 63	20	34	1,239	1,720,844	5,118,447
COAL, BITUMINOUS, total <sup>1</sup>	67	83	4,499	6,173,601	10,451,715	63 and over	6	6			

<sup>1</sup> See headnote.

TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 38 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 detailed power-equipment information. Of the 179 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 7]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—						
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 or more
Number of enterprises reporting power equipment <sup>1</sup>	172	3	14	45	39	45	21	5
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup>	104,559	34	958	7,293	13,499	31,535	27,441	23,799
Prime movers, total horsepower	37,077	34	629	1,625	5,263	10,787	11,124	7,675
Steam engines—	129	1	7	10	46	33	31	1
Number	13,470	20	355	825	3,353	2,572	5,945	400
Horsepower	196	6	9	18	19	84	50	10
Internal-combustion engines—	28,607	14	274	800	1,850	8,215	5,179	7,275
Number	610			25	350	235		
Horsepower								
Horsepower rating of inactive prime movers, included above								
Electric motors driven by purchased energy—	1,828		24	202	254	546	429	368
Number	67,482		329	5,668	8,206	20,748	16,317	10,124
Horsepower								
Electric motors driven by energy generated by enterprises reporting:	203				9	12	5	177
Number	4,931				125	40	300	4,466
Horsepower								
Electric generators:	9				3	2	1	3
Number	5,475				275	160	250	4,800
Kilowatts								

<sup>1</sup> See headnote.

<sup>2</sup> See Table 8 for total horsepower rating of power equipment for all enterprises.

MINES AND QUARRIES—OKLAHOMA

TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 MONTH OR NEAREST REPRESENTATIVE DAY												Percent min. num. is of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
All industries, total.....	10,278	10,908	10,766	9,987	9,522	8,776	9,423	9,993	10,743	10,841	11,443	11,009	9,984	76.7
Coal, bituminous.....	4,716	5,078	5,791	4,313	3,377	3,079	3,557	4,084	4,715	5,123	5,570	5,630	5,673	53.2
Zinc.....	4,117	3,899	3,670	4,198	4,658	4,338	4,427	4,300	4,412	4,210	4,200	3,900	3,039	65.2
Limestone.....	507	471	448	505	493	489	485	581	543	528	550	500	513	79.9
Lead.....	390	387	390	392	383	291	381	457	461	379	470	443	250	53.2
Sand and gravel.....	231	196	201	228	237	235	242	244	244	242	248	239	211	79.0
Gypsum.....	119	145	134	136	136	138	105	107	113	108	109	101	99	65.3
Granite.....	50	42	47	56	55	53	51	48	53	53	53	41	50	73.2
Other industries.....	148	90	85	160	183	153	175	162	202	198	153	95	129	42.1

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. One of the "Other industries," however, was of greater importance in the State than one of the industries shown separately]

	Total	Zinc <sup>1</sup>	Coal, bituminous	Limestone	Sand and gravel	Lead	Gypsum	Granite	Other industries <sup>2</sup>
Number of enterprises <sup>3</sup> .....	217	57	97	18	21	6	4	7	7
Number of mines and quarries.....	281	87	113	21	36	6	4	7	7
Persons engaged in industry, total (all classes).....	11,018	4,372	5,010	550	307	412	120	63	172
Proprietors and firm members.....	66	7	42	3	2	—	—	11	1
Principal salaried officers of corporations <sup>4</sup> .....	124	6	55	6	17	4	—	—	6
Other salaried officers and employees <sup>4</sup> .....	550	212	203	34	57	18	7	2	17
Wage earners (average for the year).....	10,278	4,117	4,716	507	231	390	110	50	148
Principal expenses:									
Salaries and wages—									
Principal officers of corporations <sup>4</sup> .....	\$740,910	\$254,973	\$189,210	\$31,683	\$183,032	\$21,280	—	—	\$60,732
Other salaried officers and employees <sup>4</sup> .....	\$1,193,094	\$546,276	\$387,892	\$69,145	\$92,620	\$54,124	\$14,356	\$2,020	\$26,637
Wage earners.....	\$13,616,561	\$5,508,272	\$6,392,491	\$521,934	\$293,563	\$623,097	\$151,610	\$65,777	\$148,817
Contract work.....	\$255,089	\$229,218	\$1,824	\$3,000	—	\$12,870	—	—	\$8,177
Supplies.....	\$5,572,289	\$3,242,176	\$1,384,555	\$340,486	\$129,543	\$280,596	\$59,481	\$20,654	\$114,788
Fuel.....	\$620,879	\$317,021	\$125,131	\$47,353	\$57,682	\$36,092	\$12,598	\$4,920	\$20,212
Purchased electric energy.....	\$1,430,626	\$831,517	\$293,373	\$115,874	\$95,160	\$73,076	\$277	\$1,925	\$19,424
Expenditures for development (included above in "Principal expenses").....	\$468,000	\$344,000	\$59,000	\$15,000	—	\$18,000	—	—	\$32,000
Value of products.....	\$33,139,080	\$16,518,953	\$10,789,776	\$1,775,772	\$1,579,431	\$1,508,124	\$297,638	\$174,769	\$494,617
Machinery and other equipment purchased during the year, total cost.....	\$950,411	\$552,467	\$234,841	\$66,772	\$51,910	\$24,771	\$3,050	\$750	\$15,850
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	106,345	57,558	27,789	7,027	7,804	4,281	658	416	752
Prime movers, total horsepower <sup>5</sup> .....	37,507	19,220	11,623	1,087	3,215	1,380	644	338	—
Steam engines—									
Number.....	151	2	118	14	7	2	—	8	—
Horsepower.....	13,900	100	11,492	725	1,135	170	—	188	—
Internal-combustion engines—									
Number.....	190	126	7	14	21	12	10	6	—
Horsepower.....	23,607	19,030	131	362	2,080	1,210	644	150	—
Electric motors driven by purchased energy—									
Number.....	1,889	979	599	109	87	67	2	6	40
Horsepower.....	68,838	38,338	16,166	5,940	4,649	2,961	14	78	752
Electric motors driven by energy generated by enterprises reporting:									
Number.....	293	177	14	—	—	—	12	—	—
Horsepower.....	4,931	4,466	425	—	—	—	40	—	—
Electric generators: <sup>6</sup>									
Number.....	9	3	5	—	—	—	1	—	—
Kilowatts.....	5,475	4,800	625	—	—	—	50	—	—
Fuel and electric energy consumed:									
Fuel—									
Coal, bituminous..... tons, 2,000 pounds.....	80,734	6,640	63,125	8,600	1,114	272	—	—	983
Fuel oils..... gallons.....	2,284,807	1,352,019	187	37,155	406,003	—	4,000	6,000	479,443
Gasoline and kerosene..... gallons.....	643,233	110,922	13,598	39,400	382,365	6,870	78,748	12,420	2,000
Gas, natural..... M cubic feet.....	630,566	545,719	12,375	—	—	64,472	—	14,000	—
Electric energy—									
Purchased..... kw.-hours.....	93,812,694	68,785,878	10,794,762	5,842,455	2,815,850	4,215,163	9,249	38,000	901,337
Generated by enterprises reporting..... kw.-hours.....	16,377,300	16,268,500	40,800	—	—	—	68,000	—	—

<sup>1</sup> Includes 12 operations on dumps and old tailings.

<sup>2</sup> Asphalt and bituminous rock, 1 enterprise; clay, 1; sand, glass, 2; sandstone, 1; silica, 1; stone, miscellaneous, 1.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> Includes 610 horsepower for inactive prime movers.

<sup>6</sup> Includes 400 kilowatts for inactive generators.

## OREGON

On the basis of the industries canvassed for 1929, Oregon ranked thirty-ninth among the States in value of mineral products and forty-second in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the 1929 figures to exclude data for the sand and gravel industry, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 27.9 per cent greater in 1929 than in 1919.

Statistics for nonproducing (development only) enterprises are given in Table 2, and are not included in any of the other tables shown.

The industries reported for 1929, ranked according to value of products, are shown in Table 3. The sand and gravel industry ranked first in the State, accounting for 31.4 per cent of the total value of products, while Oregon ranked twenty-fifth among the States in 1929 in the industry.

The corporation was the dominant form of organization among enterprises in the mining industries in Oregon in 1929. As shown in Table 4, corporations

operated 61.3 per cent of all enterprises, employed 85.2 per cent of the wage earners, and produced 82.6 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Mining activity in Oregon is characterized by the small size of its enterprises, measured by the number of wage earners employed, as shown in Table 5.

Table 6 shows the length of the working week for wage earners, practically all of whom were employed 48 hours or more per week.

Table 7 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 18 enterprises in the 250-499 horsepower group reported 6,259 horsepower, or 51.1 per cent. This amount, together with 2,793 reported by 4 enterprises in the 500-999 group, represents 73.9 per cent of the total shown.

The statistics for wage earners presented in Table 8, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 9 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919 <sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (—)	ALL MINING AND QUARRYING INDUSTRIES			
	1929		1919			1929		1919	
	All industries	Revised (for comparative purposes) <sup>2</sup>				All industries	Revised (for comparative purposes) <sup>2</sup>		
Number of enterprises <sup>3</sup> .....	62	44	50	( <sup>4</sup> )	Principal expenses: <sup>7</sup>				
Number of mines and quarries.....	65	44	52	( <sup>4</sup> )	Salaries.....	<sup>5</sup> \$233, 772	<sup>5</sup> \$127, 632	\$147, 821	—13. 7
Persons engaged, total.....	905	714	847	—15. 7	Wages.....	1, 172, 421	957, 831	992, 957	—3. 5
Proprietors and firm members.....	29	18	37	( <sup>4</sup> )	Contract work.....	95, 019	95, 019	35, 888	164. 8
Salaried employees.....	<sup>6</sup> 100	<sup>6</sup> 61	70	( <sup>4</sup> )	Supplies and materials.....	420, 572	343, 377	545, 949	—37. 1
Wage earners (average for the year) <sup>8</sup> .....	776	635	740	—14. 2	Fuel.....	160, 747	120, 601	68, 680	84. 3
Power equipment (total horsepower).....	12, 707	7, 249	6, 264	15. 7	Purchased electric energy.....	90, 416	61, 710	64, 783	—4. 7
					Value of products <sup>9</sup> .....	3, 512, 125	2, 410, 038	1, 884, 871	27. 9

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

# MINES AND QUARRIES—OREGON

199

TABLE 2.—SUMMARY FOR NONPRODUCING ENTERPRISES: 1929

Number of enterprises.....	50	Principal expenses—Continued	
Number of mines.....	59	Contract work.....	\$15,783
Wage earners (average for the year).....	311	Supplies, fuel, and purchased electric energy.....	184,432
Power equipment (total horsepower).....	1,885	Expenditures for development (included above in "Principal expenses").....	402,695
Principal expenses:			
Salaries.....	\$80,170		
Wages.....	371,555		

TABLE 3.—PRINCIPAL INDUSTRIES RANKED IN ORDER OF VALUE OF PRODUCTS: 1929

INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products	INDUSTRY	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Value of products
All industries, total.....	62	65	776	\$3,512,125	Basalt.....	10	10	83	\$309,766
Sand and gravel.....	18	21	141	1,102,087	Gold, placer.....	4	4	41	217,220
Limestone.....	4	4	65	324,050	Coal, bituminous.....	3	3	33	85,003
					Other industries <sup>3</sup> .....	23	23	413	1,473,990

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>3</sup> Copper, 2 enterprises; gold, lode, 3; granite, 2; marble, 1; mercury, 4; sandstone, 2; silica, 2; stone, miscellaneous, 7. See headnote, Table 9.

TABLE 4.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	62	65	776	\$3,512,125	LIMESTONE, total.....	4	4	65	\$324,050
Corporations.....	38	39	661	2,900,000	Corporations.....	4	4	65	324,050
Other <sup>1</sup> .....	24	26	115	612,035	BASALT, total.....	10	10	83	309,766
SAND AND GRAVEL, total.....	18	21	141	1,102,087	Corporations.....	6	6	60	227,197
Corporations.....	9	10	88	693,034	Other <sup>1</sup> .....	4	4	23	82,569
Other <sup>1</sup> .....	9	11	53	409,053	GOLD, PLACER, total.....	4	4	41	217,220
					Corporations <sup>2</sup> .....	4	4	41	217,220

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

<sup>2</sup> Includes 1 other form of organization.

TABLE 5.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total <sup>3</sup> .....	61	64	776	\$1,172,421	\$3,504,125	SAND AND GRAVEL, total.....	18	21	141	\$214,590	\$1,102,087
Not reported.....	1	1	63	93,573	410,062	1 to 5.....	7	8	23	42,705	286,717
1 to 5.....	21	22	314	406,668	1,574,523	6 to 20.....	10	12	118	171,885	815,370
6 to 20.....	31	33	135	223,441	538,105	21 to 50.....	1	1	41	77,918	217,220
21 to 50.....	4	4	204	388,730	981,345	GOLD, PLACER, total.....	4	4	41	77,918	217,220
51 to 100.....	4	4	376	573,014	1,555,827	6 to 20.....	4	4	41	77,918	217,220
STONE INDUSTRIES, total.....	26	26	28	39,013	106,208						
1 to 5.....	11	11	118	167,174	491,986						
6 to 20.....	11	11	230	366,827	957,633						
21 to 50.....	1	1									
51 to 100.....	3	3									

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>3</sup> Exclusive of 1 enterprise employing no wage earners.

MINES AND QUARRIES—OREGON

TABLE 6.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Oregon was 9, distributed as follows: Basalt, 2; coal, bituminous, 1; gold, lode, 2; marble, 1; stone, miscellaneous, 3. The combined value of products represented by these enterprises was \$75,992]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products		
ALL INDUSTRIES, total <sup>1</sup>	53	56	751	\$1,140,604	\$3,436,133	SAND AND GRAVEL, total..	18	21	141	\$214,590	\$1,102,087		
25 and over but under 36.....	1	1	16	26,112	83,181	36 and over but under 40.....	1	1	65	107,108	502,945		
36 and over but under 40.....	1	1				48.....	9	9					
44 and over but under 48.....	2	2				54 and over but under 63.....	8	11				76	107,482
48.....	29	29				GOLD, PLACER, total.....	4	4	41	77,918	217,220		
54 and over but under 63.....	17	20	346	498,431	1,531,241	25 and over but under 36.....	1	1	41	77,918	217,220		
63 and over.....	3	3	368	534,401	1,748,209	54 and over but under 63.....	3	3					
STONE INDUSTRIES, total <sup>1</sup>	20	20	361	555,068	1,508,756								
44 and over but under 48.....	2	2	223	328,260	886,325								
48.....	12	12				117	195,148	548,929					
54 and over but under 63.....	3	3				21	31,660	73,502					
63 and over.....	3	3											

<sup>1</sup> See headnote.

TABLE 7.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 9 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 detailed power-equipment information. Of the 53 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 2]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—				TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—			
		Less than 99	100 to 249	250 to 499	500 to 999			Less than 99	100 to 249	250 to 499	500 to 999
Number of enterprises reporting power equipment <sup>1</sup>	51	13	16	18	4	Prime movers—Continued. Horsepower rating of inactive prime movers, included above.....	20			20	
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup>	12,244	749	2,443	6,259	2,793	Electric motors driven by purchased energy— Number.....	232	17	33	128	54
Prime movers, total horsepower.....	4,954	354	1,330	2,715	555	Horsepower.....	7,200	305	1,113	3,544	2,238
Steam engines— Number.....	48	2	8	36	2	Electric motors driven by energy generated by enterprises reporting: Number.....	21		5	16	
Horsepower.....	2,365	65	350	1,800	150	Horsepower.....	161		25	126	
Steam turbines— Number.....	2			2		Electric generators: Number.....	5		3	2	
Horsepower.....	100			100		Kilowatts.....	149		30	119	
Internal-combustion engines— Number.....	50	9	14	16	11						
Horsepower.....	2,280	289	780	815	405						
Water wheels and water turbines— Number.....	4		4								
Horsepower.....	200		200								

<sup>1</sup> See headnote.

<sup>2</sup> See Table 9 for total horsepower rating of power equipment for all enterprises.

TABLE 8.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.....	776	606	585	681	832	913	879	839	895	890	855	773	<i>568</i>	61.1
Sand and gravel.....	141	<i>117</i>	119	134	147	149	150	150	156	162	149	132	122	72.2
Basalt.....	83	58	<i>31</i>	68	93	114	118	66	109	114	76	68	77	26.3
Limestone.....	65	59	66	68	71	100	58	53	77	58	86	41	46	41.0
Gold, placer.....	41	27	25	<i>24</i>	53	54	57	55	48	46	27	38	33	42.1
Coal, bituminous.....	33	39	38	37	32	30	31	28	30	30	33	34	34	71.8
Other stones.....	228	136	138	173	266	294	277	292	280	286	287	252	48	16.3
Other industries.....	185	170	<i>168</i>	177	170	172	188	186	195	194	107	208	198	80.8

# MINES AND QUARRIES—OREGON

201

TABLE 9.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. One of the "Other industries," however, was of greater importance in the State than some of the industries shown separately]

	Total	Sand and gravel	Limestone	Basalt	Gold, placer	Coal, bituminous	Other stones <sup>1</sup>	Other industries <sup>2</sup>
Number of enterprises <sup>3</sup> .....	82	18	4	10	4	3	12	11
Number of mines and quarries.....	65	21	4	10	4	3	12	11
Persons engaged in industry, total (all classes).....	905	191	67	103	46	40	248	210
Proprietors and firm members.....	29	11	3	3	1	1	9	5
Principal salaried officers of corporations <sup>4</sup> .....	22	13	1	2	1	1	11	4
Other salaried officers and employees <sup>4</sup> .....	78	26	1	15	4	5	11	14
Wage earners (average for the year).....	776	141	65	88	41	38	228	185
Principal expenses:								
Salaries and wages—								
Principal officers of corporations <sup>4</sup> .....	\$79, 140	\$52, 140	\$3, 000	\$3, 600	\$2, 400	\$300		\$17, 700
Other salaried officers and employees <sup>4</sup> .....	\$154, 932	\$54, 000	\$2, 400	\$20, 547	\$7, 350	\$0, 720	\$31, 015	\$32, 600
Wage earners.....	\$1, 172, 421	\$214, 590	\$113, 749	\$106, 359	\$77, 018	\$1, 871	\$352, 906	\$255, 028
Contract work.....	\$95, 019		\$9, 561	\$0, 532	\$1, 058	\$1, 474	\$72, 851	\$3, 498
Supplies.....	\$420, 572	\$77, 195	\$20, 018	\$5, 243	\$22, 400	\$4, 270	\$148, 048	\$84, 398
Fuel.....	\$166, 747	\$40, 146	\$1, 480	\$12, 100	\$295	\$1, 990	\$44, 965	\$65, 771
Purchased electric energy.....	\$90, 415	\$37, 705	\$7, 319	\$8, 477	\$27, 442	\$1, 912	\$0, 672	\$0, 888
Expenditures for development (included above in "Principal expenses").....	\$233, 000		\$5, 000	\$29, 000	\$11, 000	\$8, 000	\$80, 000	\$91, 000
Value of products.....	\$3, 512, 125	\$1, 102, 087	\$324, 050	\$309, 766	\$217, 220	\$85, 003	\$922, 011	\$551, 988
Machinery and other equipment purchased during the year, total cost.....	\$144, 863	\$59, 383		\$4, 159	\$10, 344		\$27, 745	\$49, 233
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	12, 707	5, 453	610	1, 698	1, 438	170	2, 350	983
Prime movers, total horsepower.....	5, 069	2, 295	40	680	200	40	1, 275	539
Steam engines—								
Number.....	51	18	1	10		1	21	
Horsepower.....	2, 480	1, 000	25	450		40	965	
Steam turbines—								
Number.....	2						2	
Horsepower.....	100						100	
Internal-combustion engines—								
Number.....	50	25	1	3			3	18
Horsepower.....	2, 289	1, 295	15	280			210	539
Water wheels and water turbines—								
Number.....	4					4		
Horsepower.....	200				200			
Electric motors driven by purchased energy—								
Number.....	244	113	19	27	29	6	26	24
Horsepower.....	7, 638	3, 163	570	1, 018	1, 238	130	1, 075	444
Electric motors driven by energy generated by enterprises reporting:								
Number.....	21				5			16
Horsepower.....	151				25			126
Electric generators:								
Number.....	5				3			2
Kilowatts.....	140				30			119
Fuel and electric energy consumed:								
Fuel—								
Coal, bituminous..... tons, 2,000 pounds.....	909	3	50		65	460	301	120
Fuel oils..... gallons.....	1, 953, 810	630, 190	21, 546	72, 802			606, 310	622, 062
Gasoline and kerosene..... gallons.....	138, 683	80, 801	3, 000	4, 020	1, 000		23, 702	26, 160
Electric energy—								
Purchased..... kw.-hours.....	7, 034, 560	2, 370, 790	455, 820	489, 690	2, 491, 475	83, 498	310, 300	832, 987
Generated by enterprises reporting..... kw.-hours.....	916, 000				216, 000			700, 000

<sup>1</sup> Granite, 2 enterprises; marble, 1; sandstone, 2; stone, miscellaneous, 7.  
<sup>2</sup> Copper, 2 enterprises; gold, lode, 3; mercury, 4; silica, 2.  
<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

# PENNSYLVANIA

On the basis of the industries canvassed for 1929, Pennsylvania ranked first among the States both in value of mineral products and in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the figures to exclude data for industries not canvassed at both censuses, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 9.2 per cent less in 1929 than in 1919. The greatest difference occurred in the bituminous-coal industry and is accounted for more by the decline in prices than by the decrease in the quantity produced. On the other hand, the combined value of products of all other industries canvassed at both censuses increased \$30,868,989, of which the anthracite industry contributed \$20,770,158. Comparative figures for 1929 and 1919 for the anthracite and bituminous-coal industries are given in Table 2.

The corporate form of organization was most common among enterprises in the mining industries in Pennsylvania in 1929. As shown in Table 3, corporations operated 58.2 per cent of all enterprises, employed 94.9 per cent of the wage earners, and produced 95.5 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 4 shows the relatively large number of small enterprises as measured by the number of wage earners employed.

Of the total number of enterprises in Pennsylvania, 67.6 per cent were in classes having not more than 50 wage earners. These enterprises employed only 6.1 per cent of the total number of wage earners and contributed 5.4 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 5, show that the 48-hour week predominated. In the anthracite industry practically all of the wage earners were employed on the 48-hour-week basis, while in the bituminous-coal industry 81.2 per cent of the wage earners were so employed.

Table 6 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 13 enterprises in the "25,000 or more" horsepower group reported 596,454 horsepower, or 27.5 per cent, while all enterprises reporting 1,000 or more accounted for 1,927,338 horsepower, or 88.8 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 7, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 8 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises. The anthracite industry ranked first in the State, accounting for 55.4 per cent of the total value of products. This industry, together with the bituminous-coal industry which ranked second in the State, produced 93.1 per cent of the total. Pennsylvania ranked first among the States in 1929 in the coal industries.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)		ALL MINING AND QUARRYING INDUSTRIES			Per cent of increase or decrease (-)
	1929		1919 <sup>2</sup>			1929		1919 <sup>2</sup>	
	All industries	Revised (for comparative purposes) <sup>3</sup>				All industries	Revised (for comparative purposes) <sup>3</sup>		
Number of enterprises <sup>4</sup> .....	1,814	1,756	2,667	-34.2	Principal expenses: <sup>7</sup>				
Number of mines and quarries <sup>4</sup> .....	2,196	2,120	3,608	-39.3	Salaries.....	\$33,776,246	\$32,936,678	\$32,450,524	1.5
Persons engaged, total.....	290,787	289,139	333,083	-13.2	Wages.....	403,957,768	401,987,709	434,999,210	-7.6
Proprietors and firm members.....	913	905	2,274	-60.2	Contract work.....	7,488,808	7,467,703	2,447,353	205.1
Salaried employees.....	13,382	13,096	16,477	-20.6	Supplies and materials.....	77,599,969	76,746,167	110,287,689	-30.4
Wage earners (average for the year) <sup>5</sup> .....	276,492	275,138	314,332	-12.5	Fuel.....	11,502,611	11,211,716	20,252,183	-44.6
Power equipment (total horsepower).....	2,180,218	2,143,828	1,628,050	31.7	Purchased electric energy.....	17,105,021	16,784,144	5,867,171	186.1
					Value of products <sup>8</sup> .....	694,975,146	683,630,842	753,179,148	-9.2

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> The figures for 1929 and 1919 have been adjusted to make them comparable. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> The figure for 1919 has been revised to make it comparable with 1929. See Table 2, footnote 2.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

MINES AND QUARRIES—PENNSYLVANIA

TABLE 2.—SUMMARY FOR ANTHRACITE AND BITUMINOUS-COAL INDUSTRIES: 1929 AND 1919

	COAL				PER CENT OF INCREASE OR DECREASE (-)	
	Anthracite		Bituminous		Anthracite	Bituminous
	1929	1919	1929	1919		
Number of enterprises <sup>1</sup> .....	198	254	1,151	1,938	-22.0	-40.0
Number of mines, collieries, culm washeries, and dredges.....	<sup>2</sup> 303	<sup>2</sup> 421	1,387	2,584	-28.0	-46.3
Wage earners (average for the year) <sup>3</sup> .....	142,801	147,372	121,000	154,992	-3.1	-21.0
Power equipment (total horsepower).....	1,041,465	899,783	937,157	658,898	15.7	42.2
Principal expenses: <sup>4</sup>						
Salaries.....	<sup>5</sup> \$19,335,930	\$12,095,469	<sup>5</sup> \$11,668,406	\$18,041,223	48.8	-35.3
Wages.....	\$229,967,059	\$210,289,473	\$157,730,207	\$211,346,693	9.4	-25.4
Contract work.....	\$6,801,898	\$1,557,845	\$464,748	\$618,094	336.6	-24.8
Supplies and materials.....	\$43,307,491	\$60,171,694	\$27,914,503	\$44,912,367	-27.9	-37.8
Fuel.....	\$7,419,721	\$11,406,117	\$1,815,514	\$7,599,659	-34.9	-76.1
Purchased electric energy.....	\$6,508,527	\$1,899,835	\$8,574,753	\$3,522,701	242.6	143.4
Value of products, total.....	\$384,854,300	\$304,084,142	\$262,456,657	\$302,973,952	5.7	-27.7
Coal—						
Quantity (tons, 2,000 pounds).....	74,546,000	88,170,000	144,111,000	150,030,000	-15.5	-3.9
Value at mine.....	\$334,754,000	\$303,945,000	\$262,310,000	\$302,171,000	5.7	-27.0
Other products.....	\$100,000	\$139,000	\$147,000	\$803,000	-28.1	-81.7

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> For 1929, includes 241 collieries, 42 dredges, and 20 culm washeries; for 1919, includes 261 collieries, 81 dredges, and 79 culm washeries.  
<sup>3</sup> See GENERAL EXPLANATIONS—Persons Engaged.  
<sup>4</sup> See GENERAL EXPLANATIONS—Expenses.  
<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

TABLE 3.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	1,814	2,196	276,492	\$694,975,146	IRON ORE, total.....	4	5	680	\$4,515,580
Corporations.....	1,056	1,398	262,376	663,891,586	Corporations.....	4	5	680	4,515,580
Other <sup>1</sup> .....	758	798	14,116	31,083,560	SLATE, total.....	33	33	1,951	4,330,001
COAL, ANTHRACITE, total.....	198	303	142,801	384,854,300	Corporations.....	30	30	1,884	4,210,606
Corporations.....	142	246	139,033	373,371,684	Other <sup>1</sup> .....	3	3	67	119,395
Other <sup>1</sup> .....	56	57	3,768	11,482,616	BASALT, total.....	20	22	566	2,236,438
COAL, BITUMINOUS, total.....	1,151	1,387	121,000	262,456,657	Corporations.....	8	10	513	2,103,334
Corporations.....	669	887	112,704	248,545,603	Other <sup>1</sup> .....	12	12	53	133,104
Other <sup>1</sup> .....	482	500	8,296	13,911,054	SANDSTONE, total.....	41	51	595	1,615,444
LIMESTONE, total.....	201	213	6,048	19,124,040	Corporations.....	18	21	421	1,157,409
Corporations.....	95	98	4,934	15,956,909	Other <sup>1</sup> .....	23	30	174	458,035
Other <sup>1</sup> .....	106	115	1,114	3,167,071	CLAY, total.....	31	34	555	1,215,882
SAND AND GRAVEL, total.....	46	54	1,203	11,002,656	Corporations.....	17	18	402	863,633
Corporations.....	42	50	1,179	10,839,665	Other <sup>1</sup> .....	14	16	153	349,249
Other <sup>1</sup> .....	4	4	29	162,991					

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

## MINES AND QUARRIES—PENNSYLVANIA

TABLE 4.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	1,814	2,196	276,492	\$403,957,768	\$694,975,146	SLATE, total.....	33	33	1,951	\$2,352,559	\$4,330,001
Not reported.....	1	1	1,256	1,374,045	3,147,623	6 to 20.....	2	2	498	581,930	1,262,442
1 to 5.....	424	426	5,577	6,192,572	12,661,706	21 to 50.....	14	14	800	947,875	1,520,956
6 to 20.....	501	525	9,953	10,781,501	21,917,075	51 to 100.....	12	12	653	822,764	1,546,603
21 to 50.....	301	332	15,051	16,786,027	29,862,322	101 to 250.....	5	5			
51 to 100.....	207	238	32,414	40,288,316	75,204,086	SAND AND GRAVEL, total.....	46	54	1,208	1,821,815	11,002,656
101 to 250.....	208	253	27,451	39,511,652	69,070,776	1 to 5.....	10	10	42	70,474	345,952
251 to 500.....	77	109	37,490	56,882,080	97,878,801	6 to 20.....	21	21	249	360,300	1,367,429
501 to 1,000.....	57	78	39,356	58,828,466	97,072,331	21 to 50.....	10	12	324	475,001	2,715,240
1,001 to 2,500.....	26	99	107,944	173,302,209	288,160,426	51 to 100.....	1	1	593	915,440	6,574,035
2,501 and over.....	17	135				101 to 250.....	4	10			
COAL, ANTHRACITE, total.....	198	303	142,801	229,967,059	384,854,800	IRON ORE, total.....	4	5	680	958,847	4,515,586
1 to 5.....	31	31	84	133,120	340,570	21 to 50.....	1	2			
6 to 20.....	20	21	221	305,009	635,445	101 to 250.....	2	2	680	958,847	4,515,586
21 to 50.....	21	21	710	1,008,401	2,015,000	251 to 500.....	1	1			
51 to 100.....	17	18	1,113	1,029,131	4,157,003	SANDSTONE, total.....	41	51	595	742,278	1,615,444
101 to 250.....	32	34	5,052	7,365,876	12,391,226	1 to 5.....	13	13	40	44,437	121,334
251 to 500.....	19	19	9,983	11,818,793	20,309,355	6 to 20.....	20	30	238	325,516	642,285
501 to 1,000.....	34	36	23,291	36,788,252	65,445,514	21 to 50.....	6	6	317	372,320	851,825
1,001 to 2,500.....	11	24	17,256	28,634,747	46,256,126	51 to 100.....	2	2			
2,501 and over.....	13	99	88,091	141,983,040	233,303,210	BASALT, total.....	20	22	566	716,009	2,236,439
COAL, BITUMINOUS, total.....	1,151	1,387	121,000	157,730,207	262,456,657	Not reported.....	1	1	30	27,151	65,337
1 to 5.....	269	269	798	816,723	1,457,198	1 to 5.....	8	8			
6 to 20.....	300	305	3,205	3,551,957	5,267,408	6 to 20.....	5	5	30	37,178	95,058
21 to 50.....	189	211	6,417	6,138,629	9,627,896	21 to 50.....	1	1	500	652,280	2,076,043
51 to 100.....	149	179	11,088	11,298,912	17,920,233	101 to 250.....	4	4			
101 to 250.....	148	184	23,946	28,314,032	47,166,044	CLAY, total.....	31	34	555	575,992	1,215,882
251 to 500.....	54	86	19,804	26,008,238	42,910,770	1 to 5.....	8	10	23	21,032	74,160
501 to 1,000.....	23	42	14,109	20,093,828	32,433,287	6 to 20.....	16	17	180	187,212	521,545
1,001 to 2,500.....	15	75	22,100	30,193,719	50,816,205	21 to 50.....	4	4	134	172,398	239,577
2,501 and over.....	4	36	19,853	31,319,160	54,857,216	51 to 100.....	3	3	218	195,350	380,600
LIMESTONE, total.....	201	213	6,048	7,733,473	19,124,040						
1 to 5.....	55	55	160	169,102	400,739						
6 to 20.....	69	75	709	800,199	2,519,352						
21 to 50.....	47	51	1,418	1,859,710	4,704,008						
51 to 100.....	17	17	1,250	1,724,291	4,331,421						
101 to 250.....	10	12	1,550	1,949,674	4,310,490						
251 to 500.....	3	3	856	1,230,597	2,718,030						

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

TABLE 5.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in Pennsylvania was 535, distributed as follows: Basalt, 1; coal, bituminous, 490; granite, 1; limestone, 10; sandstone, 8; stone, miscellaneous, 16. The combined value of products represented by these enterprises was \$4,849,404]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	1,279	1,661	273,289	\$400,639,667	\$690,125,742	SLATE, total.....	38	33	1,951	\$2,352,559	\$4,330,001
Not reported.....	1	1	2,406	2,151,892	3,647,769	40.....	2	2	760	896,133	1,592,548
Under 25.....	34	35	6,206	6,726,172	11,064,141	44 and over but under 48.....	8	8	958	1,188,443	2,008,366
25 and over but under 36.....	59	76	8,832	11,898,141	21,767,872	Over 48 but under 54.....	17	17	233	267,983	729,087
36 and over but under 40.....	10	12	141	146,270	297,277	54 and over but under 63.....	5	5			
40.....	65	77	5,460	7,826,137	12,383,079	63 and over.....	1	1			
Over 40 but under 44.....	5	5	236,325	353,713,744	595,036,556	SAND AND GRAVEL, total.....	46	54	1,203	1,821,815	11,002,656
44 and over but under 48.....	60	65	2,881	3,271,227	6,288,789	40.....	1	1	91	127,837	236,646
48.....	649	947	9,449	12,939,978	35,315,968	44 and over but under 48.....	2	2	23	31,500	114,973
Over 48 but under 54.....	60	114	552	699,088	2,358,286	48.....	1	1	784	1,220,369	9,154,981
54 and over but under 63.....	286	316				Over 48 but under 54.....	4	4	310	442,019	1,496,056
63 and over.....	11	13				54 and over but under 63.....	34	40			
COAL, ANTHRACITE, total.....	198	303	142,801	229,967,059	384,854,300	63 and over.....	4	6	680	958,847	4,515,586
Under 25.....	3	3	400	401,132	536,286	IRON ORE, total.....	4	5	680	958,847	4,515,586
25 and over but under 36.....	4	4	451	560,154	950,709	48.....	2	2	680	958,847	4,515,586
36 and over but under 40.....	4	4	30	68,240	128,030	Over 48 but under 54.....	1	2			
40.....	5	7	3,186	5,421,847	8,492,478	54 and over but under 63.....	1	1			
44 and over but under 48.....	161	264	138,226	222,860,290	373,564,928	SANDSTONE, total <sup>1</sup> .....	33	43	543	680,216	1,535,691
48.....	3	3	11	17,407	40,807	40.....	1	1	71	74,175	277,192
Over 48 but under 54.....	26	26	437	637,989	1,141,053	Over 40 but under 44.....	1	1	45	59,102	155,369
54 and over but under 63.....	2	2				44 and over but under 48.....	3	3	427	546,939	1,103,130
63 and over.....						48.....	1	1			
COAL, BITUMINOUS, total <sup>1</sup> .....	661	897	117,989	154,029,725	258,024,050	Over 48 but under 54.....	5	10	564	714,509	2,231,138
Under 25.....	31	32	2,036	1,750,760	3,108,983	54 and over but under 63.....	21	26			
25 and over but under 36.....	50	67	5,695	6,086,617	9,895,682	63 and over.....	1	1			
36 and over but under 40.....	8	9	916	1,215,098	1,871,239	BASALT, total <sup>1</sup> .....	10	21	564	714,509	2,231,138
40.....	52	64	8,343	11,290,738	20,510,231	Not reported.....	1	1	82	83,867	200,045
Over 40 but under 44.....	3	3	108	108,757	200,687	40.....	3	3	27	23,840	60,500
44 and over but under 48.....	25	28	1,563	1,591,407	2,340,028	Over 48 but under 54.....	5	5	455	606,802	1,010,593
48.....	461	652	95,855	127,866,471	212,428,765	54 and over but under 63.....	9	11			
Over 48 but under 54.....	11	18	887	932,216	1,341,876	63 and over.....	1	1			
54 and over but under 63.....	20	24	2,586	3,787,666	6,325,669	CLAY, total.....	31	34	555	575,992	1,215,882
63 and over.....						25 and over but under 36.....	2	2	15	14,550	66,434
LIMESTONE, total <sup>1</sup> .....	182	194	5,974	7,706,768	18,963,718	44 and over but under 48.....	1	1	15	14,550	66,434
25 and over but under 36.....	2	2	72	109,368	228,800	48.....	16	19	248	250,508	490,781
36 and over but under 40.....	1	2				Over 48 but under 54.....	3	3	41	42,374	70,646
40.....	2	2	80	87,344	235,410	54 and over but under 63.....	8	8	251	268,551	588,021
Over 40 but under 44.....	1	1				63 and over.....	1	1			
44 and over but under 48.....	7	7	85	99,881	221,097						
48.....	12	13	1,445	2,063,943	4,742,365						
Over 48 but under 54.....	36	38	685	743,131	1,927,985						
54 and over but under 63.....	120	128	3,607	4,639,101	11,597,471						
63 and over.....	1	1									

<sup>1</sup> See headnote.

TABLE 6.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 535 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 detailed power-equipment information. Of the 1,279 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 83]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—									
		Less than 25	25 to 99	100 to 249	250 to 499	500 to 999	1,000 to 2,499	2,500 to 4,999	5,000 to 9,999	10,000 to 24,999	25,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	1,196	55	213	219	223	166	149	82	50	26	13
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	2,170,651	769	12,367	36,515	81,273	113,399	245,051	272,710	411,217	401,806	596,454
Prime movers, total horsepower.....	867,875	358	5,062	9,098	17,095	28,211	57,955	80,754	108,466	154,430	406,440
Steam engines—											
Number.....	4,726	14	87	109	267	234	379	531	638	775	1,692
Horsepower.....	628,818	151	2,574	5,621	14,908	22,285	51,203	71,573	101,589	79,811	278,603
Steam turbines—											
Number.....	335		6	2		2	15	20	11	68	211
Horsepower.....	212,364		123	300		665	1,190	5,785	4,232	72,301	127,768
Internal-combustion engines—											
Number.....	529	19	103	64	39	83	83	52	47	38	1
Horsepower.....	26,748	207	2,285	2,912	2,087	5,261	5,562	3,396	2,645	2,318	75
Water wheels and water turbines—											
Number.....	7		2	4	1						
Horsepower.....	445		80	205	100						
Horsepower rating of inactive prime movers, included above.....	47,906		156	164	469	1,100	2,586	4,302	7,835	8,090	23,182
Electric motors driven by purchased energy—											
Number.....	30,881	64	467	1,107	2,176	2,478	4,989	4,301	5,588	6,280	3,365
Horsepower.....	1,302,776	411	7,295	26,417	64,178	85,133	187,106	191,956	302,751	247,468	190,008
Electric motors driven by energy generated by enterprises reporting:											
Number.....	13,080	2	7	59	88	748	730	1,017	408	3,313	6,708
Horsepower.....	566,956	15	149	1,294	2,033	21,954	26,369	30,883	14,982	164,294	315,013
Electric generators:											
Number.....	873	1	3	15	21	65	75	62	37	59	35
Kilowatts.....	198,089	12	270	1,468	2,535	8,704	11,988	21,085	9,514	53,183	89,330

<sup>1</sup> See headnote.

<sup>2</sup> See Table 8 for total horsepower rating of power equipment for all enterprises.

## MINES AND QUARRIES—PENNSYLVANIA

TABLE 7.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 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, total.....	276,492	235,063	282,639	276,002	230,204	278,411	284,687	<b>260,324</b>	273,150	276,482	270,883	280,924	281,140	91.0
Coal, anthracite.....	142,801	151,783	147,181	139,468	145,788	144,770	132,169	<b>127,103</b>	140,835	144,195	146,303	146,792	147,241	83.7
Coal, bituminous.....	121,000	122,450	124,620	124,980	121,875	110,971	118,519	<b>118,223</b>	113,316	118,570	110,900	121,615	122,953	94.6
Limestone.....	6,048	5,082	5,096	5,455	5,974	6,078	6,729	6,817	6,896	6,530	6,533	5,882	<b>4,907</b>	71.2
Slate.....	1,951	1,936	1,924	1,971	1,964	1,977	1,995	1,914	1,933	1,982	1,962	1,946	<b>1,911</b>	95.8
Sand and gravel.....	1,208	<b>967</b>	968	1,003	1,123	1,233	1,411	1,406	1,380	1,352	1,370	1,226	1,057	68.5
Iron ore.....	680	<b>637</b>	650	658	668	693	703	703	670	725	715	647	696	87.9
Sandstone.....	595	304	<b>276</b>	379	624	739	799	787	772	800	769	554	339	34.5
Basalt.....	506	<b>408</b>	430	523	562	654	679	641	629	606	616	508	472	60.1
Clay.....	555	<b>576</b>	560	581	570	572	543	536	<b>529</b>	547	554	553	531	91.0
Silica.....	327	316	323	324	326	337	338	330	337	337	325	324	<b>309</b>	91.4
Granite.....	263	<b>181</b>	189	226	267	298	302	312	307	305	290	264	213	58.0
Stone, miscellaneous.....	168	145	<b>155</b>	145	171	183	178	184	183	181	187	172	168	72.2
Sand, molding.....	146	<b>82</b>	84	100	115	127	153	188	182	170	176	199	169	41.2
Other industries.....	184	186	185	180	177	179	179	180	181	182	183	182	184	95.2

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. One of the "Other industries," however, was of greater importance in the State than some of the industries shown separately]

	Total	COAL		Limestone <sup>1</sup>	Sand and gravel	Iron ore	Slate
		Anthracite	Bituminous				
Number of enterprises <sup>2</sup> .....	1,814	198	1,161	201	46	4	33
Number of mines and quarries.....	2,196	303	1,387	213	54	6 5	33
Persons engaged in industry, total (all classes).....	290,787	150,494	126,321	6,540	1,479	720	2,074
Proprietors and firm members.....	913	38	645	120	4	—	3
Principal salaried officers of corporations <sup>3</sup> .....	913	163	520	60	66	—	40
Other salaried officers and employees <sup>4</sup> .....	12,469	7,493	4,147	312	201	48	74
Wage earners (average for the year).....	276,492	142,801	121,000	6,048	1,208	680	1,951
Principal expenses:							
Salaries and wages—							
Principal officers of corporations <sup>3</sup> .....	\$3,626,653	\$854,016	\$1,885,377	\$227,457	\$387,853	\$14,750	\$155,452
Other salaried officers and employees <sup>4</sup> .....	\$30,149,293	\$18,481,914	\$9,783,029	\$755,808	\$472,528	\$119,047	\$169,462
Wage earners.....	\$403,967,768	\$229,907,059	\$167,730,207	\$7,783,473	\$1,821,815	\$958,847	\$2,352,559
Contract work.....	\$7,488,805	\$6,801,808	\$464,748	\$167,609	\$20,951	—	\$7,862
Supplies.....	\$77,699,060	\$43,307,911	\$27,914,503	\$3,631,095	\$822,961	\$382,344	\$236,237
Fuel.....	\$11,502,611	\$7,410,721	\$1,815,514	\$421,845	\$283,507	\$1,187,205	\$120,471
Purchased electric energy.....	\$17,105,021	\$6,508,527	\$8,574,753	\$990,147	\$304,772	\$273,585	\$188,121
Expenditures for development (included above in "Principal expenses").....	\$13,518,000	\$7,002,000	\$4,564,000	\$343,000	—	\$377,000	\$65,000
Value of products.....	\$694,975,146	\$384,854,300	\$262,456,657	\$19,124,040	\$11,002,666	\$4,515,586	\$4,830,001
Machinery and other equipment purchased during the year, total cost.....	\$15,801,390	\$5,579,720	\$7,911,803	\$1,052,605	\$871,201	\$74,384	\$14,353
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	2,189,218	1,041,465	937,157	103,188	43,717	16,448	15,334
Prime movers, total horsepower <sup>5</sup> .....	873,046	618,042	180,855	31,057	22,205	7	6,209
Steam engines—							
Number.....	4,856	3,286	952	172	178	—	119
Horsepower.....	633,489	455,327	131,243	14,059	16,313	—	5,890
Steam turbines—							
Number.....	385	282	47	3	1	—	1
Horsepower.....	212,364	160,424	41,135	10,100	400	—	265
Internal-combustion engines—							
Number.....	529	98	97	125	56	—	3
Horsepower.....	26,748	2,201	8,327	6,103	5,492	—	54
Water wheels and water turbines—							
Number.....	7	—	1	3	—	—	—
Horsepower.....	445	—	150	135	—	—	—
Electric motors driven by purchased energy—							
Number.....	31,377	6,598	21,017	1,817	588	426	430
Horsepower.....	1,316,172	423,423	756,302	72,131	21,512	16,441	9,125
Electric motors driven by energy generated by enterprises reporting:							
Number.....	13,080	9,917	3,104	6	46	—	—
Horsepower.....	566,986	464,164	100,037	306	2,435	—	—
Electric generators: <sup>6</sup>							
Number.....	373	139	217	6	10	—	—
Kilowatts.....	193,089	128,395	63,377	318	989	—	—
Fuel and electric energy consumed:							
Fuel—							
Coal—							
Anthracite..... tons, 2,240 pounds.....	5,128,919	5,044,989	—	40,849	16	39,852	2,214
Bituminous..... tons, 2,000 pounds.....	1,307,243	28,833	1,045,805	81,297	65,100	13,679	23,537
Coke..... tons, 2,000 pounds.....	22,489	—	20,911	837	—	19	—
Fuel oils..... gallons.....	2,329,075	36,930	32,024	61,782	882,068	1,098,299	7,000
Gasoline and kerosene..... gallons.....	1,547,589	92,038	120,991	803,569	233,356	400	14,369
Gas, natural..... M cubic feet.....	106,301	—	88,525	6,182	—	—	—
Electric energy—							
Purchased..... kw.-hours.....	1,279,191,466	470,248,027	668,536,799	63,731,644	16,383,807	40,216,707	7,793,547
Generated by enterprises reporting..... kw.-hours.....	600,580,823	478,428,569	118,857,266	314,898	2,978,100	—	—

See footnotes at end of table.

MINES AND QUARRIES—PENNSYLVANIA

207

TABLE 8.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929—Continued

[See note at head of this table]

	Basalt	Sandstone <sup>2</sup>	Clay	Granite	Silica <sup>3</sup>	Stone, miscellaneous	Sand, molding	Other industries <sup>4</sup>
Number of enterprises <sup>1</sup> .....	20	41	31	24	18	30	12	5
Number of mines and quarries.....	22	51	34	25	19	30	13	7
Persons engaged in industry, total (all classes).....	628	680	604	318	347	206	160	198
Proprietors and firm members.....	14	26	11	21	2	25	4	-----
Principal salaried officers of corporations <sup>5</sup> .....	10	15	5	8	4	3	1	2
Other salaried officers and employees <sup>6</sup> .....	38	44	33	26	14	10	18	12
Wage earners (average for the year).....	566	595	555	263	327	168	140	184
Principal expenses:								
Salaries and wages—								
Principal officers of corporations <sup>7</sup> .....	\$33,950	\$38,870	\$12,340	\$31,715	\$14,800	\$12,940	\$1,688	\$7,736
Other salaried officers and employees <sup>6</sup> .....	\$77,185	\$80,143	\$53,800	\$46,628	\$20,162	\$15,308	\$27,499	\$36,720
Wage earners.....	\$716,609	\$742,273	\$575,092	\$324,930	\$359,178	\$210,360	\$148,244	\$266,222
Contract work.....	\$6,358	-----	\$1,074	\$10,162	-----	\$7,132	\$154	-----
Supplies.....	\$364,289	\$230,339	\$98,343	\$171,332	\$81,091	\$71,466	\$31,841	\$194,837
Fuel.....	\$107,864	\$32,710	\$36,093	\$11,695	\$11,677	\$12,726	\$7,388	\$34,629
Purchased electric energy.....	\$68,613	\$55,059	\$19,334	\$27,545	\$8,598	\$14,015	\$10,105	\$54,347
Expenditures for development (included above in "Principal expenses").....	\$103,000	\$116,000	\$12,000	\$14,000	\$17,000	\$4,000	\$1,000	-----
Value of products.....	\$2,236,438	\$1,015,444	\$1,215,882	\$731,484	\$689,836	\$568,783	\$441,648	\$1,192,341
Machinery and other equipment purchased during the year, total cost.....	\$104,839	\$44,288	\$11,200	\$44,535	\$14,985	\$54,681	\$6,272	\$16,964
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	12,188	7,167	2,199	2,850	1,784	2,114	1,673	1,934
Prime movers, total horsepower <sup>8</sup> .....	6,040	3,563	1,422	1,031	1,075	645	476	420
Steam engines—								
Number.....	46	38	12	23	12	12	3	3
Horsepower.....	3,088	2,680	961	741	650	548	189	320
Steam turbines—								
Number.....	-----	-----	-----	1	-----	-----	-----	-----
Horsepower.....	-----	-----	-----	40	-----	-----	-----	-----
Internal-combustion engines—								
Number.....	56	41	14	11	11	4	11	-----
Horsepower.....	2,001	873	461	250	425	97	307	-----
Water wheels and water turbines—								
Number.....	2	-----	-----	-----	-----	-----	-----	1
Horsepower.....	60	-----	-----	-----	-----	-----	-----	100
Electric motors driven by purchased energy—								
Number.....	141	115	37	52	28	45	35	48
Horsepower.....	6,139	3,614	777	1,819	709	1,469	1,197	1,514
Electric motors driven by energy generated by enterprises reporting:								
Number.....	-----	-----	3	-----	4	-----	-----	-----
Horsepower.....	-----	-----	35	-----	9	-----	-----	-----
Electric generators: <sup>9</sup>								
Number.....	-----	-----	-----	-----	1	-----	-----	-----
Kilowatts.....	-----	-----	-----	-----	10	-----	-----	-----
Fuel and electric energy consumed:								
Fuel—								
Coal—								
Anthracite..... tons, 2,240 pounds.....	-----	456	500	3	-----	-----	-----	40
Bituminous..... tons, 2,000 pounds.....	18,628	6,683	7,503	1,795	2,254	1,167	1,775	9,224
Coke..... tons, 2,000 pounds.....	702	-----	-----	-----	-----	-----	-----	-----
Fuel oils..... gallons.....	155,445	6,200	33,221	12,000	3,108	740	253	-----
Gasoline and kerosene..... gallons.....	80,815	37,963	22,134	35,176	32,416	46,102	15,653	3,607
Gas, natural..... M cubic feet.....	-----	-----	10,230	-----	-----	-----	1,304	-----
Electric energy—								
Purchased..... kw.-hours.....	3,521,848	2,890,365	665,063	993,344	503,381	831,099	681,390	2,104,395
Generated by enterprises reporting..... kw.-hours.....	-----	-----	-----	-----	2,000	-----	-----	-----

<sup>1</sup> Data for several limestone enterprises not included. See "Stone" report, Table 4, p. 332.  
<sup>2</sup> Data for several sandstone enterprises not included. See "Stone" report, Table 4, p. 332.  
<sup>3</sup> Ganister, 12 enterprises; siliceous mica schist, 2; silica rock, 1; silica sand, 3.  
<sup>4</sup> Abrasive materials (rotenstone), 1 enterprise; mineral pigments, 1; sand, glass, 2; talc, 1.  
<sup>5</sup> See GENERAL EXPLANATIONS—The Enterprise.  
<sup>6</sup> Includes 2 mills for which separate reports were received.  
<sup>7</sup> Not including data for salaried officers and employees of "Central Administrative" offices.  
<sup>8</sup> Includes 47,908 horsepower for inactive prime movers.  
<sup>9</sup> Includes 28,216 kilowatts for inactive generators.

## RHODE ISLAND

On the basis of the industries canvassed for 1929, Rhode Island ranked forty-seventh among the States both in value of mineral products and in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.)

Table 1 gives principal statistics for all industries canvassed in 1929 and in 1919. These statistics are not strictly comparable as the figures for 1929 include

data for two enterprises in the sand and gravel industry, which industry was not included in the scope of the census for 1919.

Table 7 presents the 1929 statistics in detail for the State as a whole and for the granite industry, the only one for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919 <sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES		Per cent of increase or decrease (—)		ALL MINING AND QUARRYING INDUSTRIES		Per cent of increase or decrease (—)
	1929 <sup>2</sup>	1919 <sup>2</sup>			1929 <sup>2</sup>	1919 <sup>2</sup>	
Number of enterprises <sup>3</sup> .....	14	14	(0)	Principal expenses: <sup>7</sup>			
Number of mines and quarries.....	14	15	(0)	Salaries.....	\$ 70, 165	\$82, 681	—15. 1
Persons engaged, total.....	301	421	—28. 5	Wages.....	384, 865	399, 648	—3. 7
Proprietors and firm members.....	11	6	(0)	Contract work.....	2, 000	1, 000	100. 0
Salaried employees.....	34	46	(0)	Supplies and materials.....	143, 735	146, 637	—2. 0
Wage earners (average for the year) <sup>6</sup> .....	256	369	—30. 6	Fuel.....	37, 161	45, 526	—18. 4
Power equipment (total horsepower).....	4, 237	3, 000	41. 2	Purchased electric energy.....	36, 322	0, 540	280. 4
				Value of products <sup>8</sup> .....	809, 381	952, 204	—15. 0

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> Figures for 1929 and 1919 not strictly comparable, due to inclusion for 1929 of data for 2 enterprises in the sand and gravel industry, not canvassed for 1919.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Per cent not computed where base is less than 100.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>6</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>7</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>8</sup> See GENERAL EXPLANATIONS—Value of Products.

TABLE 2.—CHARACTER OF ORGANIZATION, FOR ALL INDUSTRIES AND FOR THE GRANITE INDUSTRY: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	14	14	256	\$809, 381	GRANITE, total.....	9	9	223	\$683, 053
Corporations.....	5	5	191	527, 346	Corporations.....	3	3	174	487, 848
Other <sup>1</sup> .....	9	9	65	282, 035	Other <sup>1</sup> .....	6	6	49	195, 205

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

TABLE 3.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR ALL INDUSTRIES AND FOR THE GRANITE INDUSTRY: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	14	14	256	\$384, 865	\$809, 381	GRANITE, total.....	9	9	223	\$341, 215	\$683, 053
1 to 5.....	6	6	20	30, 801	78, 448	1 to 5.....	3	3	9	10, 558	26, 492
6 to 20.....	6	6	236	354, 064	730, 933	6 to 20.....	4	4	214	330, 657	656, 561
51 to 100.....	2	2				51 to 100.....	2	2			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

TABLE 4.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR ALL INDUSTRIES AND FOR THE GRANITE INDUSTRY: 1929

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	11	11	235	\$363, 430	\$772, 457	GRANITE, total <sup>1</sup> .....	8	8	221	\$338, 623	\$675, 563
40.....	1	1	114	189, 690	337, 845	40.....	1	1	114	189, 690	337, 845
Over 40 but under 44.....	1	1				44 and over but under 48.....	2	2			
44 and over but under 48.....	2	2	48 and over but under 63.....	4	4	54 and over but under 63.....	2	2			
48.....	4	4		93	133, 597		2	2			
54 and over but under 63.....	3	3		28	40, 143		2	2			

<sup>1</sup> This table does not include data for 3 enterprises whose value of product was less than \$20,000, in industries as follows: Basalt, 1; granite, 1; limestone, 1.

TABLE 5.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—			TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—			
		25 to 99	100 to 249	250 or more			25 to 99	100 to 249	250 or more	
		Number of enterprises reporting power equipment.....	14	6			5	3	Prime movers and electric motors—Continued.	
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	4, 237	357	810	3, 070	Steam turbines—					
Prime movers, total horsepower.....	1, 322	322	145	855	Number.....	9				9
Steam engines—					Horsepower.....	450				450
Number.....	14	4		10	Internal-combustion engines—					
Horsepower.....	525	120		405	Number.....	14	10	4		
					Horsepower.....	347	202	145		
					Electric motors driven by purchased energy—					
					Number.....	79	8	22		49
					Horsepower.....	2, 915	35	665		2, 215

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR ALL INDUSTRIES AND FOR THE GRANITE INDUSTRY: 1929

[The month of maximum employment 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 MONTH OR NEAREST REPRESENTATIVE DAY												Percent minimum of maximum
		January	February	March	April	May	June	July	August	September	October	November	December	
ALL INDUSTRIES, total.....	256	227	221	230	250	280	288	273	270	299	256	250	217	72. 6
Granite.....	223	199	193	210	216	244	251	236	233	263	225	220	188	71. 5
Other industries.....	33	28	28	29	34	36	37	37	37	36	31	30	29	75. 7

TABLE 7.—DETAILED STATISTICS FOR ALL INDUSTRIES AND FOR THE GRANITE INDUSTRY: 1929

[This table presents statistics for the industry for which it is possible to give separate figures without disclosing data for individual enterprises]

	Total	Granite	Other industries <sup>1</sup>		Total	Granite	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	14	9	5	Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	4, 237	3, 667	570
Number of mines and quarries.....	14	9	5	Prime movers, total horsepower.....	1, 322	1, 042	280
Persons engaged in industry, total (all classes).....	301	258	43	Steam engines—			
Proprietors and firm members.....	11	8	3	Number.....	14	14	
Principal salaried officers of corporations <sup>2</sup> .....	12	8	4	Horsepower.....	525	525	
Other salaried officers and employees <sup>2</sup> .....	22	19	3	Steam turbines—			
Wage earners (average for the year).....	256	223	33	Number.....	9	9	
Principal expenses:				Horsepower.....	450	450	
Salaries and wages—				Internal-combustion engines—			
Principal officers of corporations <sup>2</sup> .....	\$33, 530	\$32, 230	\$1, 300	Number.....	14	3	11
Other salaried officers and employees <sup>2</sup> .....	\$26, 635	\$24, 304	\$2, 331	Horsepower.....	347	67	280
Wage earners.....	\$34, 865	\$34, 215	\$43, 650	Electric motors driven by purchased energy—			
Contract work.....	\$2, 000	\$1, 000	\$1, 000	Number.....	79	68	11
Supplies.....	\$143, 735	\$131, 744	\$11, 991	Horsepower.....	2, 915	2, 625	290
Fuel.....	\$37, 161	\$29, 419	\$7, 742	Fuel and electric energy consumed:			
Purchased electric energy.....	\$56, 322	\$35, 665	\$657	Fuel—			
Expenditures for development (included above in "Principal expenses").....	\$35, 000	\$35, 000		Coal—			
Value of products.....	\$800, 381	\$683, 053	\$126, 328	Anthracite..... tons, 2, 240 pounds.....	1, 203	1, 203	
Machinery and other equipment purchased during the year, total cost.....	\$16, 751	\$3, 951	\$12, 800	Bituminous..... tons, 2, 000 pounds.....	3, 445	3, 400	45
				Fuel oils..... gallons.....	963	963	
				Gasoline and kerosene..... gallons.....	54, 500		54, 500
				Electric energy, purchased.....kw.-hours.....	1, 508, 704	1, 482, 424	26, 280

<sup>1</sup> Basalt, 1 enterprise; limestone, 1; sand and gravel, 2; stone, miscellaneous, 1.

<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

## SOUTH CAROLINA

On the basis of the industries canvassed for 1929, South Carolina ranked forty-second among the States in value of mineral products and thirty-eighth in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) The figures given in Table 1 are not strictly comparable, due to the inclusion of statistics for the sand and gravel industry in the figures for 1929.

The corporation was the dominant form of organization among enterprises in the mining industries in South Carolina in 1929. As shown in Table 2, corporations operated 78.8 per cent of all enterprises, employed 97.5 per cent of the wage earners, and produced 97.7 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 3 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in South Carolina, 72.7 per cent were in classes having not more than 50 wage earners. These enterprises employed 27.5 per cent of the total number of wage earners and contributed 34.5 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 4, show that the "54 and over but under 63" hours-per-week class predomi-

nated, while the group "63 and over" ranked second. In the granite industry more than half of the number of wage earners employed were in the "54 and over but under 63" class. In the clay industry the longer working week predominated.

Table 5 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 7 enterprises in the "1,000 or more" horsepower group reported 11,602 horsepower, or 63 per cent. This amount, together with 4,105 horsepower reported by 6 enterprises in the next smaller group, represents 85.3 per cent of the total shown.

The statistics for wage earners presented in Table 6, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 7 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The granite industry ranked first in the State, accounting for 56.5 per cent of the total value of products. This industry, together with the clay industry, produced 87.2 per cent of the total.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919 <sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES			ALL MINING AND QUARRYING INDUSTRIES	
	1929 <sup>2</sup>	1919		1929 <sup>2</sup>	1919
Number of enterprises <sup>3</sup> .....	33	20	Principal expenses: <sup>6</sup> Salaries..... Wages..... Contract work..... Supplies and materials..... Fuel..... Purchased electric energy..... Value of products <sup>7</sup> .....		
Number of mines and quarries.....	35	20		\$298, 078	\$139, 843
Persons engaged, total.....	1, 423	1, 008		929, 506	680, 484
Proprietors and firm members.....	7	15		7, 956	
Salaried employees.....	1 118	60		392, 920	303, 371
Wage earners (average for the year) <sup>4</sup> .....	1, 298	933		145, 060	122, 170
Power equipment (total horsepower).....	18, 470	4, 650		178, 103	23, 270
				3, 092, 967	1, 850, 747

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> Figures for 1929 not strictly comparable with 1919, due to inclusion of statistics for the sand and gravel industry in the figures for 1929.

<sup>3</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>4</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>5</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>6</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>7</sup> See GENERAL EXPLANATIONS—Value of Products.

MINES AND QUARRIES—SOUTH CAROLINA

TABLE 2.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
ALL INDUSTRIES, total.....	33	35	1,208	\$3,092,967	GRANITE, total.....	17	17	669	\$1,748,081
Corporations.....	26	28	1,200	3,022,162	Corporations.....	10	10	637	1,677,276
Other <sup>1</sup> .....	7	7	82	70,805	Other <sup>1</sup> .....	7	7	32	70,805
					CLAY, total.....	9	10	514	950,187
					Corporations.....	9	10	514	950,187

<sup>1</sup> Partnerships, enterprises operated by individuals, etc.

TABLE 3.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
ALL INDUSTRIES, total.....	33	35	1,208	\$929,506	\$3,092,967	GRANITE—Continued.					
1 to 5.....	6	6	22	17,576	42,354	21 to 50.....	3	3	126	\$88,056	\$464,851
6 to 20.....	12	13	131	98,773	337,284	51 to 100.....	4	4	501	389,929	1,198,727
21 to 50.....	6	6	204	140,430	656,842	101 to 250.....	2	2			
51 to 100.....	6	6	413	290,862	992,187	CLAY, total.....	9	10	514	330,500	950,187
101 to 250.....	2	2	528	331,805	1,094,300	1 to 5.....	2	2			
251 to 500.....	1	2				6 to 20.....	3	3	74	53,702	122,427
GRANITE, total.....	17	17	669	509,375	1,748,081	21 to 50.....	1	1			
1 to 5.....	4	4	12	8,520	22,060	51 to 100.....	2	2	440	282,798	827,760
6 to 20.....	4	4	30	22,870	62,443	251 to 500.....	1	2			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

TABLE 4.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total <sup>1</sup> .....	29	31	1,286	\$920,986	\$3,070,907	GRANITE—Continued.					
Under 25.....	2	2	53	38,401	90,592	40.....	2	2	234	\$205,437	\$822,515
36 and over but under 40.....	1	1				44 and over but under 48.....	1	1			
40.....	2	2	245	211,593	842,290	48.....	1	1	370	257,017	812,014
44 and over but under 48.....	2	2				54 and over but under 63.....	6	6			
48.....	3	4	54	52,658	161,654	CLAY, total.....	9	10	514	336,500	950,187
Over 48 but under 54.....	2	2	494	335,536	1,148,611	48.....	1	1	32	25,888	63,297
54 and over but under 63.....	14	14	440	282,798	827,760	Over 48 but under 54.....	2	2	42	27,814	59,130
63 and over.....	3	4				54 and over but under 63.....	3	3	440	282,798	827,760
GRANITE, total <sup>1</sup> .....	13	13	657	500,855	1,726,021	63 and over.....	3	4			
Under 25.....	2	2	53	38,401	90,592						
36 and over but under 40.....	1	1									

<sup>1</sup> Exclusive of data for 4 enterprises reporting products valued at \$22,060. Enterprises whose value of product was less than \$20,000 were permitted to report on an abbreviated schedule which did not call for information pertaining to prevailing hours of labor.

TABLE 5.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 4 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 detailed power-equipment information. Of the 29 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 2]

TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—					TYPE	Total, all sizes	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSEPOWER OF—				
		25 to 99	100 to 249	250 to 499	500 to 999	1,000 or more			25 to 99	100 to 249	250 to 499	500 to 999	1,000 or more
Number of enterprises reporting power equipment <sup>1</sup> .....	27	3	6	5	6	7	Prime movers, etc.—Continued. Prime movers—Continued. Internal-combustion engines— Number.....	39	7	2	5	4	21
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>2</sup> .....	18,423	229	888	1,599	4,105	11,602	Horsepower.....	1,652	141	150	166	150	1,055
Prime movers, total horsepower.....	4,012	141	655	1,306	470	1,440	Electric motors driven by purchased energy— Number.....	317	4	12	20	81	200
Steam engines— Number.....	30	—	8	10	11	10	Horsepower.....	14,411	88	233	293	3,635	10,162
Horsepower.....	2,360	—	505	1,150	320	385	Electric generators: Number.....	1	—	—	—	—	1
							Kilowatts.....	3	—	—	—	—	3

<sup>1</sup> See headnote.<sup>2</sup> See Table 7 for total horsepower rating of power equipment for all enterprises.

TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929

[The month of maximum employment 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 MONTH OR NEAREST REPRESENTATIVE DAY												Per cent minimum is of maximum
		Janu-ary	Febru-ary	March	April	May	June	July	August	Septem-ber	October	Novem-ber	Decem-ber	
All industries, total.....	1,298	1,381	1,386	1,383	1,418	1,363	1,304	1,313	1,290	<i>1,156</i>	1,251	1,201	1,157	80.1
Granite.....	669	724	719	730	732	710	664	681	657	<i>625</i>	642	631	614	71.7
Clay.....	514	515	541	524	567	547	527	524	522	512	505	460	459	78.8
Other industries.....	115	142	126	129	129	106	113	108	111	<i>69</i>	104	110	104	69.7

TABLE 7.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises]

	Total	Granite	Clay	Other industries <sup>1</sup>
Number of enterprises <sup>2</sup> .....	33	17	9	7
Number of mines and quarries.....	35	17	10	8
Persons engaged in industry, total (all classes).....	1,423	738	538	147
Proprietors and firm members.....	7	7	—	—
Principal salaried officers of corporations <sup>3</sup> .....	27	18	5	4
Other salaried officers and employees <sup>3</sup> .....	91	44	19	28
Wage earners (average for the year).....	1,298	699	514	115
Principal expenses:				
Salaries and wages—				
Principal officers of corporations <sup>3</sup> .....	\$107,160	\$78,727	\$8,661	\$19,772
Other salaried officers and employees <sup>3</sup> .....	\$100,918	\$103,053	\$44,949	\$42,916
Wage earners.....	\$929,506	\$509,375	\$336,500	\$83,631
Contract work.....	\$7,956	\$2,356	—	\$5,600
Supplies.....	\$302,920	\$225,971	\$123,499	\$43,450
Fuel.....	\$145,060	\$41,080	\$70,773	\$33,207
Purchased electric energy.....	\$178,103	\$136,837	\$37,702	\$3,564
Value of products.....	\$3,092,967	\$1,748,081	\$950,187	\$394,699
Machinery and other equipment purchased during the year, total cost.....	\$152,768	\$30,005	\$119,463	\$3,300
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	18,470	13,183	3,969	1,318
Prime movers, total horsepower.....	4,059	1,427	1,402	1,230
Steam engines—				
Number.....	41	18	13	10
Horsepower.....	2,407	502	825	1,080
Internal-combustion engines—				
Number.....	39	16	21	2
Horsepower.....	1,652	925	577	150
Electric motors driven by purchased energy—				
Number.....	317	192	121	4
Horsepower.....	14,411	11,756	2,567	88
Electric generators:				
Number.....	1	1	—	—
Kilowatts.....	3	3	—	—
Fuel and electric energy consumed:				
Fuel—				
Coal—				
Anthracite..... tons, 2,240 pounds.....	1,025	1,500	125	—
Bituminous..... tons, 2,000 pounds.....	21,125	3,714	12,331	5,080
Coke..... tons, 2,000 pounds.....	2,308	150	2,158	—
Fuel oils..... gallons.....	80,293	12,182	2,020	16,000
Gasoline and kerosene..... gallons.....	280,964	60,160	145,804	55,000
Electric energy purchased..... kw.-hours.....	11,104,801	8,635,863	2,411,978	56,960

<sup>1</sup> Barite, 1 enterprise; sand and gravel, 6.<sup>2</sup> See GENERAL EXPLANATIONS—The Enterprise.<sup>3</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

## SOUTH DAKOTA

On the basis of the industries canvassed for 1929, South Dakota ranked thirty-sixth among the States in value of mineral products and thirty-seventh in number of wage earners employed in mining and quarrying industries. (See GENERAL EXPLANATIONS—Scope of the Census.) Since the scope of the censuses for 1919 and 1929 was not the same as to the industries covered, comparisons as to the magnitude of the mining and quarrying industries can not be made directly between the statistics for the two years; but by revision of the 1929 figures to exclude data for the sand and gravel industry, comparison of the activities of the remaining industries is made possible. On this basis, the value of products, as shown in Table 1, was 37.7 per cent greater in 1929 than in 1919.

One enterprise producing sand and gravel was reported for North Dakota. In order to avoid disclosure of this operation, the data have been included with those of the same industry in South Dakota.

The corporate form of organization was most common among enterprises in the mining industries in South Dakota in 1929. As shown in Table 2, corporations operated 66.7 per cent of all enterprises, employed 97.2 per cent of the wage earners, and produced 98.6 per cent of the total value of products. Other forms of organization include partnerships, enterprises operated by individuals, etc.

Table 3 shows the relatively large number of small enterprises as measured by the number of wage earners employed. Of the total number of enterprises in South Dakota, 94.9 per cent were in classes having

not more than 50 wage earners. These enterprises employed only 16.3 per cent of the total number of wage earners and contributed 13.5 per cent of the total value of products.

The statistics for the length of the working week for wage earners, given in Table 4, show that enterprises operating 54 hours or more predominated. In the gold (lode) industry practically all of the wage earners were included in the "54 and over but under 63" class.

Table 5 gives power-equipment figures for enterprises classified according to horsepower rating. Of the aggregate horsepower shown, 4 enterprises in the "250 or over" horsepower group reported 22,701 horsepower or 89.8 per cent, while all enterprises reporting 100 horsepower or more accounted for 25,012 horsepower or 99 per cent of the aggregate for the State.

The statistics for wage earners presented in Table 6, showing the changes in the numbers employed from month to month, reflect conditions prevailing in the industries during the census year.

Table 7 presents the 1929 statistics in detail for the State as a whole and for each industry for which separate figures can be given without disclosing, exactly or approximately, the data reported by individual enterprises.

The gold (lode) industry ranked first in the State, accounting for 86.5 per cent of the total value of products. This industry, together with the stone industries, produced 93.6 per cent of the total.

TABLE 1.—SUMMARY FOR ALL INDUSTRIES: 1929 AND 1919<sup>1</sup>

	ALL MINING AND QUARRYING INDUSTRIES				Per cent of increase or decrease (—)	ALL MINING AND QUARRYING INDUSTRIES				
	1929		1919			1929		1919		
	All industries <sup>2</sup>	Revised (for comparative purposes) <sup>3</sup>				All industries <sup>2</sup>	Revised (for comparative purposes) <sup>3</sup>			
Number of enterprises <sup>4</sup> .....	39	35	23	(6)						
Number of mines and quarries.....	39	35	28	(6)						
Persons engaged, total.....	1,693	1,638	1,880	-12.9						
Proprietors and firm members.....	12	12	15	(6)						
Salaried employees.....	6 123	6 113	80	(6)						
Wage earners (average for the year) <sup>5</sup> .....	1,558	1,513	1,785	-15.2						
Power equipment (total horsepower).....	25,659	24,892	11,844	110.2						
						Principal expenses: <sup>6</sup>				
						Salaries.....	\$ 402,717	\$ 337,045	\$ 210,810	89.3
						Wages.....	2,603,128	2,545,017	2,497,340	1.0
						Contract work.....			11,941	
						Supplies and materials.....	1,416,013	1,407,539	1,008,196	39.6
						Fuel.....	188,826	150,659	238,703	-36.9
						Purchased electric energy.....	28,363	26,940	45,316	-40.6
						Value of products <sup>7</sup> .....	7,020,436	7,319,587	5,314,516	37.7

<sup>1</sup> See GENERAL EXPLANATIONS—Scope of the Census.

<sup>2</sup> Data for 1 sand and gravel enterprise located in North Dakota included in figures for South Dakota, to avoid disclosure of individual operations.

<sup>3</sup> The figures for 1929 have been adjusted to make them comparable with 1919. See GENERAL EXPLANATIONS—Scope of the Census.

<sup>4</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>5</sup> Per cent not computed where base is less than 100.

<sup>6</sup> Not including data for salaried officers and employees of "Central Administrative" offices.

<sup>7</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>8</sup> See GENERAL EXPLANATIONS—Expenses.

<sup>9</sup> See GENERAL EXPLANATIONS—Value of Products.

MINES AND QUARRIES—SOUTH DAKOTA

TABLE 2.—CHARACTER OF ORGANIZATION, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products	INDUSTRY AND CLASS	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Value of products
All industries, total <sup>1</sup> .....	39	39	1,558	\$7,620,436	STONE INDUSTRIES, total.....	16	16	148	\$542,792
Corporations <sup>1</sup> .....	26	26	1,514	7,512,669	Corporations.....	11	11	123	484,192
Other <sup>2</sup> .....	13	13	44	107,767	Other <sup>2</sup> .....	5	5	25	58,600
GOLD, LODE, total.....	2	2	1,304	6,591,144	SAND AND GRAVEL, total <sup>1</sup> .....	4	4	45	300,849
Corporations.....	2	2	1,304	6,591,144	Corporations <sup>1</sup> .....	4	4	45	300,849

<sup>1</sup> Data for 1 enterprise located in North Dakota included in figures for South Dakota, to avoid disclosure of individual operations.

<sup>2</sup> Partnerships, enterprises operated by individuals, etc.

TABLE 3.—SIZE OF ENTERPRISES AS MEASURED BY NUMBER OF WAGE EARNERS, FOR SELECTED INDUSTRIES: 1929

INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products	INDUSTRY AND SPECIFIED NUMBERS OF WAGE EARNERS PER ENTERPRISE	Number of enterprises <sup>1</sup>	Number of mines and quarries	Wage earners (average for the year) <sup>2</sup>	Wages	Value of products
All industries, total <sup>1</sup> .....	39	39	1,558	\$2,603,128	\$7,620,436	GOLD, LODE, total.....	2	2	1,304	\$2,209,107	\$6,591,144
1 to 5.....	21	21	63	79,545	273,933	51 to 100.....	1	1	1,304	2,269,107	6,591,144
6 to 20.....	14	14	191	254,476	755,359	1,001 to 2,500.....	1	1			
21 to 50.....	2	2	1,304	2,269,107	6,591,144	STONE INDUSTRIES, total.....	16	16	148	206,168	542,792
51 to 100.....	1	1				1 to 5.....	7	7	28	33,905	102,303
1,001 to 2,500.....	1	1				6 to 20.....	8	8	120	172,263	440,489
						21 to 50.....	1	1			

<sup>1</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>2</sup> See GENERAL EXPLANATIONS—Persons Engaged.

<sup>3</sup> Data for 1 sand and gravel enterprise located in North Dakota included in figures for South Dakota, to avoid disclosure of individual operations.

TABLE 4.—PREVAILING HOURS OF LABOR PER WEEK FOR WAGE EARNERS, FOR SELECTED 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 prevailing hours of labor. The number of enterprises in this class in South Dakota was 12, distributed as follows: Coal, bituminous, 3; granite, 2; limestone, 1; sandstone, 1; The combined value of products represented by these enterprises was \$38,650]

INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products	INDUSTRY AND PREVAILING HOURS OF LABOR PER WEEK	Number of enterprises	Number of mines and quarries	Wage earners (average for the year)	Wages	Value of products
ALL INDUSTRIES, total.....	27	27	1,510	\$2,550,807	\$7,531,786	GOLD, LODE, total.....	2	2	1,304	\$2,209,107	\$6,591,144
Under 25.....	1	1	183	278,363	469,481	48.....	1	1	1,304	2,269,107	6,591,144
44 and over but under 48.....	1	1									
48.....	13	13	1,327	2,272,444	7,062,305	64 and over but under 63.....	1	1			
54 and over but under 63.....	11	11				STONE INDUSTRIES, total <sup>1</sup> .....	12	12	126	180,268	499,692
63 and over.....	1	1				44 and over but under 48.....	1	1	98	149,157	369,526
						48.....	8	8	28	31,111	127,160
						54 and over but under 63.....	3	3			

<sup>1</sup> See headnote. <sup>2</sup> Data for 1 sand and gravel enterprise located in North Dakota included in figures for South Dakota, to avoid disclosure of individual operations.

TABLE 5.—ENTERPRISES CLASSIFIED ACCORDING TO TOTAL RATING OF POWER EQUIPMENT: 1929

[This table does not include data for 12 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 detailed power-equipment information. Of the 27 enterprises whose value of product was \$20,000 or more, no power equipment was reported by 2]

TYPE	Total, all sizes <sup>1</sup>	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSE POWER OF—			TYPE	Total, all sizes <sup>1</sup>	RATING OF POWER EQUIPMENT FOR ENTERPRISES INDIVIDUALLY REPORTING TOTAL HORSE POWER OF—		
		Less than 100	100 to 249	250 or more			Less than 100	100 to 249	250 or more
Number of enterprises reporting power equipment <sup>2</sup> .....	25	7	14	4	Prime movers, etc.—Continued				
Prime movers and electric motors driven by purchased energy, aggregate horsepower <sup>3</sup> .....	25,270	258	2,311	22,701	Electric motors driven by purchased energy—				
Prime movers, total horsepower.....	22,335	95	710	21,630	Number.....	92	6	64	22
Steam engines—					Horsepower.....	2,935	163	1,601	1,171
Number.....	10		6	4	Electric motors driven by energy generated by enterprises reporting:				
Horsepower.....	4,590		240	4,350	Number.....	381			381
Steam turbines—					Horsepower.....	15,733			15,733
Number.....	2			2	Electric generators:				
Horsepower.....	3,600			3,600	Number.....	7			7
Internal-combustion engines—					Kilowatts.....	11,400			11,400
Number.....	19	4	12	3					
Horsepower.....	1,645	95	470	1,080					
Water wheels and water turbines—									
Number.....	9			9					
Horsepower.....	12,500			12,500					

<sup>1</sup> Data for 1 sand and gravel enterprise located in North Dakota included in figures for South Dakota, to avoid disclosure of individual operations.

<sup>2</sup> See headnote.

<sup>3</sup> See Table 7 for total horsepower rating of power equipment for all enterprises.

# MINES AND QUARRIES—SOUTH DAKOTA

215

**TABLE 6.—WAGE EARNERS, BY MONTHS, FOR SELECTED INDUSTRIES: 1929**

[The month of maximum employment 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 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, total <sup>1</sup> .....	1,558	<b>1,487</b>	1,483	1,491	1,520	1,565	1,612	1,636	1,648	1,634	1,618	1,537	1,504	88.4
Gold, lode.....	1,304	<b>1,295</b>	1,320	1,312	1,299	<i>1,291</i>	1,309	1,310	1,318	1,295	1,300	1,294	1,299	97.8
Stone industries.....	148	<i>100</i>	<i>100</i>	102	119	160	178	183	192	200	185	130	116	50.0
Sand and gravel <sup>1</sup> .....	45	<i>5</i>	<i>5</i>	17	39	45	58	75	71	72	73	52	31	6.7
Feldspar.....	8	<i>5</i>	<i>5</i>	5	6	12	12	13	12	12	6	6	6	38.5
Other industries.....	53	<i>52</i>	53	55	58	57	55	55	55	55	54	55	53	89.7

<sup>1</sup> Data for 1 enterprise located in North Dakota included in figures for South Dakota, to avoid disclosure of individual operations.

**TABLE 7.—DETAILED STATISTICS FOR SELECTED INDUSTRIES: 1929**

[This table presents statistics for each industry for which it is possible to give separate figures without disclosing data for individual enterprises. Two of the "Other industries," however, were of greater importance in the State than one of the industries shown separately]

	Total <sup>1</sup>	Gold, lode	Stone industries <sup>2</sup>	Sand and gravel <sup>1</sup>	Feldspar	Other industries <sup>3</sup>
Number of enterprises <sup>4</sup> .....	39	2	16	4	3	14
Number of mines and quarries.....	39	2	16	4	3	14
Persons engaged in industry, total (all classes).....	1,693	1,358	177	55	10	63
Proprietors and firm members.....	12		5			7
Principal salaried officers of corporations <sup>5</sup> .....	14		9			3
Other salaried officers and employees <sup>5</sup> .....	109	84	15		2	3
Wage earners (average for the year).....	1,558	1,304	148	45	8	53
Principal expenses:						
Salaries and wages—						
Principal officers of corporations <sup>4</sup> .....	\$59,250		\$29,850	\$22,400		
Other salaried officers and employees <sup>5</sup> .....	\$350,407	\$305,247	\$23,850	\$13,272	\$1,900	\$6,198
Wage earners.....	\$2,603,128	\$2,269,107	\$200,168	\$58,111	\$9,371	\$60,371
Supplies.....	\$1,410,013	\$1,315,877	\$71,877	\$8,474	\$510	\$19,275
Fuel.....	\$188,826	\$145,897	\$1,028	\$33,167	\$774	\$2,060
Purchased electric energy.....	\$28,503		\$20,049	\$1,923	\$400	\$401
Expenditures for development (included above in "Principal expenses").....	\$508,000	\$433,000	\$12,000		\$2,000	\$61,000
Value of products.....	\$7,620,436	\$6,591,144	\$542,792	\$300,849	\$35,480	\$150,171
Machinery and other equipment purchased during the year, total cost.....	\$30,538		\$7,631	\$22,222	\$85	\$600
Prime movers and electric motors driven by purchased energy, aggregate horsepower.....	25,659	21,530	2,738	767	300	329
Prime movers, total horsepower.....	22,594	21,530	30	670	65	299
Steam engines—						
Number.....	23	4	2	6		11
Horsepower.....	4,849	4,350	30	240		229
Steam turbines—						
Number.....	2	2				
Horsepower.....	3,600	3,600				
Internal-combustion engines—						
Number.....	19	3		11	2	3
Horsepower.....	1,045	1,080		430	65	70
Water wheels and water turbines—						
Number.....	9	9				
Horsepower.....	12,500	12,500				
Electric motors driven by purchased energy—						
Number.....	104		85	5	11	3
Horsepower.....	3,065		2,703	97	235	30
Electric motors driven by energy generated by enterprises reporting:						
Number.....	381	381				
Horsepower.....	15,733	15,733				
Electric generators:						
Number.....	7	7				
Kilowatts.....	11,400	11,400				
Fuel and electric energy consumed:						
Fuel—						
Coal, bituminous..... tons, 2,000 pounds.....	43,880	42,930	50	900		
Coke..... tons, 2,000 pounds.....	133	133				
Fuel oils..... gallons.....	119,933	107,590				12,427
Gasoline and kerosene..... gallons.....	191,451	37,970		775	141,608	3,788
Gas—						
Manufactured..... M cubic feet.....	56		56			
Natural..... M cubic feet.....	0,279	0,279				
Electric energy—						
Purchased..... kw.-hours.....	853,901		738,840	96,171	11,800	7,090
Generated by enterprises reporting..... kw.-hours.....	45,822,900	45,822,900				

<sup>1</sup> Data for 1 enterprise located in North Dakota included in figures for South Dakota, to avoid disclosure of individual operations.

<sup>2</sup> Granite, 7 enterprises; limestone, 3; sandstone, 6.

<sup>3</sup> Coal, bituminous, (lignite) 8 enterprises; gypsum, 1; mica, 1; miscellaneous minerals, 4 (amblygonite, columbite, and spodumene).

<sup>4</sup> See GENERAL EXPLANATIONS—The Enterprise.

<sup>5</sup> Not including data for salaried officers and employees of "Central Administrative" offices.