FULLER'S EARTH

The fuller's-earth industry in the United States produced 185,761 short tons of fuller's earth with an average value at mills of $10.90 per ton. When the value of other products and of services performed for other concerns is included, the total value of the industry's products in 1939 was $2,107,000.

The industry paid $438,000 to an average of 562 wage earners for a total of 1,051,000 man-hours of labor, or about 42 cents per man-hour. Payments to salaried employees, of whom there were 116 in October of the year, totaled $308,000. Supplies and materials used in 1939 cost $374,000; fuel, $164,000; and purchased electric energy, $95,000. Work done on contract by other concerns, mostly removal of overburden, cost $72,000. These expenses totaled $1,450,000. Expenditures for buildings erected and machinery installed during the year amounted to $85,000.

Fuller's earth was produced in eight States by 21 companies that operated 22 open pits and 18 associated mills or preparation plants. The latter were engaged principally in crushing, drying, grinding, and screening fuller's earth. Ten pits and 7 mills, operated by 9 companies, were located in Texas, the chief producing State; 3 mines and 3 mills, operated by 3 companies, were located in Georgia; the remaining operations were scattered over California, Florida, Illinois, Louisiana, Nevada, and Tennessee. Georgia and Texas accounted for 62 percent of the total output.

The quantity of fuller's earth produced in 1939 was about half that of 1929,[1] when it was close to the peak reached in 1930. The average number of wage earners declined 43 percent during the decade from an average of 991 in 1929 to an average of 562 in 1939. Until 1930 the growth of the industry had roughly paralleled the rapid expansion in petroleum refining, the major consumer of fuller's earth, and the decline in the output of this naturally adsorptive clay in the last decade reflects mainly the decreased demand of the petroleum industry. This reduced demand is due partly to new techniques of oil refining that require smaller amounts of fuller's earth, to the relative decrease in the production of lubricating oils for which the largest proportion of fuller's earth is used, and to the substitution of artificially activated bleaching or clarifying earths such as suitable bentonites and, to a lesser extent, bauxite.

Of the average of 562 wage earners that were engaged in mining and preparing fuller's earth for the market, 175 were in Texas, 144 in Georgia, and the remaining 243 in the 6 other States. For the industry as a whole, the wage earners worked an average of 8.1 hours per shift. Operations in Texas were active the equivalent of 253 full days; in Georgia, 215 days; and in all other States, 221 days. Virtually all operations were active one shift per day.

Despite the declines in production and employment since 1929, the total horsepower rating of power equipment available for use at mines and mills increased by 80 percent from 8,200 in 1929 to 14,800 in 1939. The horsepower rating per wage earner rose from an average or 3 in 1919 to 8 in 1929 and to 26 in 1939. From 1929 to 1939 the total horsepower rating of engines and motors driving mobile equipment such as power shovels and trucks increased 112 percent compared with an increase of 65 percent in the horsepower rating of power units driving stationary equipment such as crushing and grinding machines.

The fuller's-earth industry requires large quantities of fuel, mainly for drying purposes, and 11 percent of the reported principal expenses in 1939 represented expenditures for fuel, chiefly fuel oil and natural gas. The industry also consumes a large amount of electric energy, principally for driving crushing and grinding equipment and 6-1/2 percent of the reported principal expenses was for purchased electricity. It is noteworthy that despite the decline in production the quantity of electric energy consumed in 1939 was 20 percent larger than it was in 1929. Although more than half of the electricity consumed in 1929 was generated by the reporting companies, nearly all of the 7,786,000 kilowatt-hours consumed in 1939 were purchased.

The industry for which 1939 statistics are here summarized includes mines and mills that were engaged in the production of fuller's earth--a naturally adsorptive clay used for bleaching or clarifying oils, fats, greases, or liquid solvents. It does not include operations engaged principally in the production of other minerals such as bentonite and bauxite that are being used to an increasing extent for the same purposes but are not naturally adsorptive. Statistics for the bentonite and bauxite industries are summarized separately.

[1] Although the industry definition for 1939 is not identical with that for 1929, it is believed that approximate comparisons may be made. See table 1, footnote 1.

TABLE 1.—PRINCIPAL STATISTICS FOR THE FULLER'S-EARTH INDUSTRY: 1939, 1929, 1919, 1909, AND 1902[1]

(For producing operations only)

ITEM	1939	1929	1919	1909	1902
Number of operating companies[2]	21	([3])	([3])	16	4
Number of pits	22	24	9	21	4
Production of clay (tons of 2,000 pounds)	186,961	369,933	([3])	([3])	11,492
Value of all products, total	$2,106,721	$4,811,629	$2,019,226	$315,762	[4]$98,144
Clay produced[5]	$2,048,866	$4,810,459	$2,019,226	([3])	$98,144
Other products and services rendered	$57,855	$1,170	----------	([3])	([3])
Number of persons engaged, total	680	1,096	873	362	[4]128
Wage earners (average for the year, including inactive periods)	562	991	824	327	[6]114
Salaried employees	116	105	49	32	14
Proprietors and firm members	2	----------	----------	3	([3])
Performing manual labor	----------	----------	----------	3	([3])
Principal expenses designated below, total	$1,450,251	$2,379,068	$1,281,284	$240,853	[4]$76,762
Wage	$437,798	$853,228	$541,163	$118,629	$33,775
Salaries	$308,183	$302,917	$93,691	$38,350	$10,000
Supplies and materials	$374,129	$425,011	$338,011	$35,797	
Fuel	$163,851	$385,356	$294,260	[8]$48,010	[7]$28,966
Purchased electric energy	$94,547	$61,577	[8]$5,603		
Contract work	$71,743	$350,979	$8,556	$67	$4,021
Cost of machinery and equipment erected or installed during year	$67,868	$98,012	([3])	([3])	([3])
Horsepower rating of power equipment, total	14,795	8,221	2,558	1,739	460
Per wage earner	26.3	8.3	3.1	5.3	4.0
Prime movers	8,937	6,775	2,250	1,719	460
Electric motors driven by purchased energy	5,858	1,446	288	20	----------
Horsepower rating of electric motors driven by energy generated by reporting companies	405	2,000	18	45	----------
Fuels consumed:					
Anthracite (tons of 2,000 pounds)	664	----------	112	([3])	([3])
Bituminous coal (tons of 2,000 pounds)	2,476	16,505	10,857	([3])	([3])
Fuel oils (barrels of 42 gallons)	65,955	143,304	82,461	([3])	([3])
Gasoline and kerosene (gallons)	101,519	470,080	29,946	([3])	([3])
Natural gas (thousands of cubic feet)	120,639	4,014	----------	([3])	([3])
Electric energy consumed (thousands of kw.-hrs.), total	7,786	6,472	([3])	([3])	([3])
Purchased	7,743	2,845	([3])	([3])	([3])
Generated by reporting companies	43	3,627	([3])	([3])	([3])

[1]Figures for 1939, 1919, and earlier years represent mines and mills producing fuller's earth, which is naturally active or adsorptive. Figures for 1929 represent, in addition to operations that produced fuller's earth, operations that produced artificially activated bleaching or clarifying earths, principally bentonite. However, the quantity of these other earths produced in 1929 was relatively small, and the statistics presented are approximately comparable. According to the United States Bureau of Mines, fuller's earth sold or used by producers in 1929 amounted to 315,985 short tons valued at $4,309,723 and in 1919, to 106,145 short tons valued at $1,998,829. Census statistics for operations producing bentonite as their principal product in 1939 are summarized separately. Figures for 1939 cover only those producing operations (mines, mills, or mines and mills operated together) for which the value of products, reported principal expenses, or cost of buildings, machinery, and equipment erected or installed during the year amounted to at least $2,500. Figures for 1929 cover only "enterprises" for which the value of products or cost of development work amounted to at least $2,500; the corresponding minimum for 1919 was $500 for value of products and $5,000 for cost of development work. No minimum was placed on the size of operations included for 1909 and 1902.

[2]For 1939 and 1909, companies that submitted more than one report are counted only once in the totals.

[3]Not available.

[4]Excludes statistics for items for which information was not available as indicated by footnotes.

[5]Figure for 1939 represents mill value of fuller's earth ($2,024,866) and bentonite ($24,000) produced (the entire output was milled).

[6]On schedules for the 1902 census, concerns were instructed that "The average number employed during the year is the number that would be required, at continuous employment for the twelve months, to produce the quantity of products reported." "In editing the schedules ... the figures for the average number of employees were reduced to a 300-day basis whenever the schedules showed them to be the average number for a shorter period; when it was evident that the employees had worked more than 300 days, the average number for the longer period was allowed to stand."

[7]Statistics for cost of purchased power were not explicitly requested for 1902 but probably are included in part in the figures reported for supplies and materials.

[8]Includes amounts paid for purchased power other than electric.

TABLE 2.—PRINCIPAL STATISTICS FOR THE FULLER'S-EARTH INDUSTRY IN THE UNITED STATES, BY STATE: 1939 AND 1929[1]

STATE AND CENSUS YEAR	Number of pits	Number of wage earners (average for the year)	Number of salaried employees	Production of clay (tons of 2,000 pounds)	Value of all products	PRINCIPAL EXPENSES DESIGNATED BELOW					Aggregate horsepower rating of power equipment
						Total	Wages	Salaries	Supplies and materials, fuel, and purchased electric energy	Contract work	
United States:											
1939	22	562	[2]116	186,961	$2,106,721	[2]$1,450,251	$437,798	[2]$308,183	$632,527	$71,743	14,795
1929	24	991	105	369,933	4,811,629	2,379,068	853,228	302,917	871,944	350,979	8,221
Georgia:											
1939	3	144	24	56,391	614,487	446,821	95,108	59,139	229,393	63,181	5,484
1929	6	705	60	210,054	3,266,966	1,560,734	518,180	154,348	554,349	333,859	5,056
Texas:											
1939	10	175	28	60,747	722,596	447,284	149,389	92,492	196,341	8,562	2,582
1929	5	51	10	32,780	260,006	131,780	59,468	21,667	49,629	1,016	809
Other States: [3]											
1939	9	243	34	69,823	769,638	478,168	192,801	78,574	206,793	----------	6,729
1929	13	235	35	127,119	1,284,657	686,554	275,580	126,904	267,966	16,104	2,576

[1]For definition of the industry and explanation of extent of comparability of statistics for 1939 and 1929 see footnotes to table 1.

[2]Includes statistics for 30 central-office employees paid $77,978 in Pennsylvania.

[3]For 1939, represents California, Florida, Illinois, Louisiana, Nevada, and Tennessee; for 1929, Arizona, California, Colorado, Illinois, Massachusetts, Nevada, and Utah.

TABLE 3.—PRINCIPAL STATISTICS FOR THE FULLER'S-EARTH INDUSTRY IN THE UNITED STATES, BY STATE: 1939 [1]

ITEM	United States	California, Florida, Illinois, Louisiana, Nevada, and Tennessee [2]	Georgia	Texas
Number of operating companies	21	9	3	9
Number of pits	22	9	3	10
Number of mills	18	8	3	7
Number of persons engaged, total	[3]680	277	168	205
Wage earners (average for the year)	562	243	144	175
Salaried employees	[3]116	34	24	28
Proprietors and firm members	2	----	----	2
Performing manual labor	----	----	----	----
Production of clay:				
Tons of 2,000 pounds	186,961	69,823	56,391	60,747
Value at mills	$2,048,866	$732,138	$606,132	$710,596
Value of all products	$2,106,721	$769,638	$614,487	$722,596
Principal expenses designated below, total	[3]$1,450,251	$478,168	$446,821	$447,284
Wages	$437,798	$192,801	$95,108	$149,889
Salaries	[3]$308,183	$78,574	$59,139	$92,492
Supplies and materials	$374,129	$89,736	$137,043	$147,350
Fuel	$163,851	$79,418	$55,999	$28,434
Purchased electric energy	$94,547	$37,639	$36,351	$20,557
Contract work	$71,743	----	$63,181	$8,562
Cost of buildings, machinery, and equipment erected or installed during year	$85,217	$16,580	$41,268	$27,369
Buildings	$17,349	$2,024	$88	$15,237
Machinery and equipment, total	$67,868	$14,556	$41,180	$12,132
Purchased in new condition	$60,968	$10,156	$41,180	$9,632
Purchased in used condition	$6,900	$4,400	----	$2,500
Total number of man-shifts worked by wage earners	129,025	53,581	32,309	43,135
Total number of man-hours worked by wage earners	1,051,172	428,648	269,435	353,089
Average number of hours worked per shift	8.1	8.0	8.3	8.2
Average hourly earning of wage earners	$0.42	$0.45	$0.35	$0.42
Tons of clay produced per man-hour	0.18	0.16	0.21	0.17
Average number of equivalent full days operations were active	229	221	215	253
Horsepower rating of power equipment, total	14,795	6,729	5,484	2,582
Per wage earner	26.3	27.7	38.1	14.8
Stationary equipment [4]	9,282	4,560	3,314	1,408
Mobile equipment [5]	5,513	2,169	2,170	1,174
Electric energy consumed (thousands of kw.-hrs.), total	7,786	2,943	3,487	1,356
Purchased	7,743	2,900	3,487	1,356
Generated by reporting companies	43	43	----	----

[1] For definition of the industry see table 1, footnote 1.
[2] California, 2 mills; Florida, 3 pits and 2 mills; Illinois, 2 pits and 2 mills; Louisiana, 1 pit and 1 mill; Nevada, 2 pits; and Tennessee, 1 pit and 1 mill.
[3] Includes statistics for 30 central-office employees paid $77,978 in Pennsylvania.
[4] Aggregate horsepower rating of engines, motors, etc. used for driving stationary or fixed equipment such as grinding and crushing equipment, stationary loading equipment, generators, mine hoists, etc.
[5] Aggregate horsepower rating of engines, motors, etc. used for driving mobile equipment such as power shovels, scraper loaders, tractors, trucks, locomotives, drills, etc.

TABLE 4.—QUANTITY AND VALUE OF PRODUCTS OF THE FULLER'S-EARTH INDUSTRY IN THE UNITED STATES, BY KIND, AND BY STATE: 1939 [1]

PRODUCT	United States	California, Florida, Illinois, Louisiana, Nevada, and Tennessee [2]	Georgia	Texas
Value of products	$2,106,721	$769,638	$614,487	$722,596
Production of fuller's earth: [2]				
Tons of 2,000 pounds	185,761	69,823	56,391	59,547
Value	$2,024,866	$732,138	$606,132	$686,596
Production of bentonite: [2]				
Tons of 2,000 pounds	1,200	----	----	1,200
Value	$24,000	----	----	$24,000
Production of tripoli: [2]				
Tons of 2,000 pounds	1,200	----	----	1,200
Value	$12,000	----	----	$12,000
Receipts for services performed for others, including milling	$45,855	$37,500	$8,355	----

[1] For definition of the industry see table 1, footnote 1.
[2] Represents prepared products.

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TABLE 5.—NUMBER OF WAGE EARNERS IN THE FULLER'S-EARTH INDUSTRY IN THE UNITED STATES, BY STATE AND BY MONTH: 1939[1]

STATE	Average for the 12 months	NUMBER RECEIVING PAY DURING PAY-ROLL PERIOD ENDING NEAREST THE 15TH OF THE MONTH											
		January	February	March	April	May	June	July	August	September	October	November	December
United States, total	562	557	557	553	564	539	541	575	555	575	585	573	575
California, Florida, Illinois, Louisiana, Nevada, and Tennessee	243	243	237	237	244	227	238	240	235	252	264	246	250
Georgia	144	151	142	133	138	148	133	146	145	143	149	154	149
Texas	175	163	178	183	182	164	170	189	175	180	172	173	176

[1]For definition of the industry see table 1, footnote 1.

TABLE 6.—EMPLOYMENT AND WORKING TIME IN THE FULLER'S-EARTH INDUSTRY IN THE UNITED STATES, BY DEPARTMENT AND BY STATE: 1939[1]

DEPARTMENT	United States	California, Florida, Illinois, Louisiana, Nevada, and Tennessee	Georgia	Texas
Average number of wage earners on active days, total	557	239	149	169
At pits, total	171	78	29	64
Open pits	169	78	29	62
Surface shops and yards	2	----	----	2
At mills	386	161	120	105
Average number of equivalent full days operations were active	229	221	215	253
At pits, total	225	212	230	239
Open pits	224	212	230	238
Surface shops and yards	260	----	----	280
At mills	231	226	211	262
Number of man-shifts worked by wage earners, total	129,025	53,581	32,309	43,135
On active days, total	127,658	52,860	31,976	42,822
At pits, total	[2]38,455	16,515	6,660	15,280
Open pits	37,935	16,515	6,660	14,760
Surface shops and yards	520	----	----	520
At mills	[3]89,203	36,345	25,316	27,542
On inactive days	1,367	721	333	313
Number of man-hours worked by wage earners, total	1,051,172	428,648	269,435	353,089
On active days, total	1,040,445	422,880	266,771	350,794
At pits, total	311,101	132,123	52,909	126,069
Open pits	306,941	132,123	52,909	121,909
Surface shops and yards	4,160	----	----	4,160
At mills	729,344	290,757	213,862	224,725
On inactive days	10,727	5,768	2,664	2,295

[1]For definition of the industry see table 1, footnote 1.
[2]All pits reported working only 1 shift.
[3]Of this number, 1,920 man-shifts worked during the second shift and 1,920 during the third shift were reported by 1 mill in Illinois.

TABLE 7.—QUANTITY OF FUEL AND ELECTRIC ENERGY CONSUMED IN THE FULLER'S-EARTH INDUSTRY IN THE UNITED STATES, 1939, 1929, 1919, AND BY STATE, 1939[1]

STATE AND CENSUS YEAR	FUEL					ELECTRIC ENERGY (thousands of kilowatt-hours)		
	Anthracite (tons of 2,000 pounds)	Bituminous coal (tons of 2,000 pounds)	Fuel oils (barrels of 42 gallons)	Gasoline and kerosene (gallons)	Natural gas (thousands of cubic feet)	Total	Purchased	Generated by reporting companies
United States, total:								
1939	664	2,476	65,955	101,519	120,639	7,786	7,743	43
1929	----	16,505	143,304	470,080	4,014	8,472	2,845	5,627
1919	112	10,857	82,461	29,946	----	([2])	([2])	([2])
STATE: 1939								
California, Florida, Illinois, Louisiana, Nevada, and Tennessee	664	1,907	36,853	45,125	3,398	2,943	2,900	43
Georgia	----	569	29,102	921	26,258	3,487	3,487	----
Texas	----	----	----	55,473	90,985	1,356	1,356	----

[1]For definition of the industry see table 1, footnote 1.
[2]Not available.

TABLE 8.—NUMBER AND HORSEPOWER RATING OF PRIME MOVERS AND ELECTRIC MOTORS IN THE FULLER'S-EARTH INDUSTRY IN THE UNITED STATES, 1939, 1929, AND 1919, AND BY STATE, 1939[1]

STATE, TYPE OF EQUIPMENT, AND CENSUS YEAR	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY										ELECTRIC MOTORS DRIVEN BY ENERGY GENERATED BY REPORTING COMPANIES	
	Aggregate horsepower	Prime movers								Electric motors driven by purchased energy			
		Total		Driving generators		Not driving generators		Ordinarily idle (included in preceding columns)					
		Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower
United States, total:													
1939	14,795	111	8,937	4	1,860	107	7,077	9	1,993	294	5,858	30	405
1929	8,221	56	6,775	(2)	(2)	(2)	(2)	(2)	1,169	94	1,446	171	2,000
1919	2,538	44	2,250	(2)	(2)	(2)	(2)	(2)	(2)	10	288	2	18
Stationary:													
1939	9,282	16	3,474	4	1,860	12	1,614	2	1,060	291	5,808	30	405
1929	5,621	23	4,177	(2)	(2)	(2)	(2)	(2)	1,154	93	1,444	171	2,000
Mobile:													
1939	5,513	95	5,463	-------	-------	95	5,463	7	933	3	50	-------	-------
1929	2,600	33	2,598	(2)	(2)	(2)	(2)	(2)	15	1	2	-------	-------
STATE: 1939													
California, Florida, Illinois, Louisiana, Nevada, and Tennessee, total	6,729	60	4,187	2	800	58	3,387	-------	-------	123	2,542	30	405
Stationary	4,560	10	2,018	2	800	8	1,218	-------	-------	123	2,542	30	405
Mobile	2,169	50	2,169	-------	-------	50	2,169	-------	-------	-------	-------	-------	-------
Georgia, total	5,484	21	3,205	2	1,060	19	2,145	8	1,915	132	2,279	-------	-------
Stationary	3,314	2	1,060	2	1,060	-------	-------	2	1,060	130	2,254	-------	-------
Mobile	2,170	19	2,145	-------	-------	19	2,145	6	855	2	25	-------	-------
Texas, total	2,582	30	1,545	-------	-------	30	1,545	1	78	39	1,037	-------	-------
Stationary	1,408	4	396	-------	-------	4	396	-------	-------	38	1,012	-------	-------
Mobile	1,174	26	1,149	-------	-------	26	1,149	1	78	1	25	-------	-------

[1] For definition of the industry see table 1, footnote 1. For definition of terms "Stationary" and "Mobile" see table 3, footnotes 4 and 5.
[2] Not available.

TABLE 9.—NUMBER OF SURFACE POWER-LOADING MACHINES IN THE FULLER'S-EARTH INDUSTRY IN THE UNITED STATES, BY TYPE, BY KIND OF POWER USED, BY SIZE, AND BY STATE: 1939[1]

TYPE OF MACHINE, KIND OF POWER USED, AND SIZE	United States	California, Florida, Illinois, Louisiana, Nevada, and Tennessee	Georgia	Texas
Power shovels, total[2]	26	14	6	6
Kind of power used:				
Steam	17	12	5	---
Internal-combustion engine	9	2	1	6
Dragline excavators, total[2]	6	2	2	2
Kind of power used:				
Steam	1	1	---	---
Internal-combustion engine	5	1	2	2
Other types, total[3]	3	1	1	1
Kind of power used:				
Electric	2	---		1
Internal-combustion engine	1	1		---

[1] No underground equipment was reported. For definition of the industry see table 1, footnote 1.
[2] Dipper or bucket capacity less than 3 cubic yards.
[3] Includes 1 scraper loader in California (with rated capacity of hoist between 10 and 25 horsepower), 1 clamshell in Georgia, and 1 bucket elevator in Texas.

TABLE 10.—SELECTED STATISTICS FOR FULLER'S-EARTH OPERATIONS IN THE UNITED STATES, CLASSIFIED BY VALUE OF PRODUCTS AND BY STATE: 1939[1]

STATE AND VALUE OF PRODUCTS	Number of pits	Number of mills	Production of clay (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED				Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members		
United States, total--	22	18	186,961	$2,106,721	[2]680	562	[2]116	2	$437,798	[2]$308,183
$1 - $19,999	6	6	8,228	86,623	64	51	11	2	27,648	12,533
$20,000 - $49,999	4	4	28,346	276,741	138	116	22	----------	79,807	46,958
$50,000 - $99,999	2	2								
$100,000 - $249,999	3	3	100,992	1,040,993	252	224	28	----------	198,026	104,182
$500,000 - $999,999	1	1								
Unclassified	6	2	49,395	702,364	[2]226	171	[2]55	----------	132,317	[2]144,510
California, Florida, Illinois, Louisiana, Nevada, and Tennessee, total	9	8	69,823	769,638	277	243	34	----------	192,801	78,574
$1 - $19,999	3	3								
$20,000 - $49,999	2	2	13,092	181,144	99	79	20	----------	51,825	41,434
$50,000 - $99,999	1	1								
$100,000 - $249,999	1	1	56,731	588,494	178	164	14	----------	140,976	37,140
Unclassified	2	1								
Georgia, total	3	3	56,391	614,487	168	144	24	----------	95,108	59,139
$1 - $19,999	1	1								
$20,000 - $49,999	1	1	56,391	614,487	168	144	24	----------	95,108	59,139
$500,000 - $999,999	1	1								
Texas, total	10	7	60,747	722,596	205	175	28	2	149,889	92,492
$1 - $19,999	2	2								
$20,000 - $49,999	1	1	17,816	131,020	71	62	7	2	42,941	9,517
$50,000 - $99,999	1	1								
$100,000 - $249,999	2	2	42,931	591,576	134	113	21	----------	106,948	82,975
Unclassified	4	1								

[1]For definition of the industry see table 1, footnote 1. Reports classified by value of products represent a single pit and a single mill reported together. Statistics shown for "Unclassified" represent reports for more than one pit, and reports for central offices reported separately from their associated fuller's-earth operations.
[2]Includes statistics for 30 central-office employees paid $77,978 in Pennsylvania.

TABLE 11.—SELECTED STATISTICS FOR FULLER'S-EARTH OPERATIONS IN THE UNITED STATES, CLASSIFIED BY QUANTITY OF CLAY PRODUCED AND BY STATE: 1939[1]

STATE AND QUANTITY OF CLAY PRODUCED (tons of 2,000 pounds)	Number of pits	Number of mills	Production of clay (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED				Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members		
United States, total--	22	18	186,961	$2,106,721	[2]680	562	[2]116	2	$437,798	[2]$308,183
1 - 999	1	1								
1,000 - 1,999	4	4	6,108	67,455	49	40	7	2	23,552	10,433
2,000 - 4,999	3	3								
5,000 - 9,999	1	1	14,125	133,665	85	70	5	----------	36,741	28,905
10,000 - 14,999	3	3								
25,000 - 34,999	1	1	112,888	1,112,842	279	250	29	----------	218,789	108,382
50,000 - 99,999	1	1								
Unclassified	8	4	53,840	792,759	[2]267	202	[2]65	----------	158,718	[2]160,463
California, Florida, Illinois, Louisiana, Nevada, and Tennessee, total	9	8	69,823	769,638	277	243	34	----------	192,801	78,574
1,000 - 1,999	2	2								
2,000 - 4,999	3	3	36,688	323,269	126	108	18	----------	90,869	42,002
25,000 - 34,999	1	1								
Unclassified	3	2	33,135	446,369	151	135	16	----------	101,932	36,572
Georgia, total	3	3	56,391	614,487	168	144	24	----------	95,108	59,139
1 - 999	1	1								
5,000 - 9,999	1	1	56,391	614,487	168	144	24	----------	95,108	59,139
50,000 - 99,999	1	1								
Texas, total	10	7	60,747	722,596	205	175	28	2	149,889	92,492
1,000 - 1,999	2	2								
10,000 - 14,999	3	3	40,042	376,206	119	108	9	2	93,105	46,579
Unclassified	5	2	20,705	346,390	86	67	19	----------	56,784	45,913

[1]For definition of the industry see table 1, footnote 1. Reports classified by quantity of clay produced represent a single pit and a single mill reported together. Statistics shown for "Unclassified" represent: Reports for more than 1 pit, reports on which figures were inadequately reported to permit classification, and reports for central offices reported separately from their associated fuller's-earth operations.
[2]Includes statistics for 30 central-office employees paid $77,978 in Pennsylvania.

TABLE 12.—SELECTED STATISTICS FOR FULLER'S-EARTH OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF WAGE EARNERS AND BY STATE: 1939[1]

STATE AND NUMBER OF WAGE EARNERS	Number of pits	Number of mills	Production of clay (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED				Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members		
United States, total	22	18	186,961	$2,106,721	[2]680	562	[2]116	2	$437,798	[2]$308,183
6 - 20	8	8	20,063	247,318	118	94	22	2	75,690	44,672
21 - 50	5	5	115,075	1,134,705	312	279	33	----	223,935	116,461
101 - 250	1	1								
Unclassified	8	4	51,823	724,698	[2]250	189	[2]61	----	138,173	[2]147,050
California, Florida, Illinois, Louisiana, Nevada, and Tennessee, total	9	8	69,823	769,638	277	243	34	----	192,801	78,574
6 - 20	4	4								
21 - 50	2	2	69,823	769,638	277	243	34	----	192,801	78,574
Unclassified	3	2								
Georgia, total	3	3	56,391	614,487	168	144	24	----	95,108	59,139
6 - 20	1	1								
101 - 250	1	1	56,391	614,487	168	144	24	----	95,108	59,139
Unclassified	1	1								
Texas, total	10	7	60,747	722,596	205	175	28	2	149,889	92,492
6 - 20	3	3	42,747	403,251	141	125	14	2	104,164	50,552
21 - 50	3	3								
Unclassified	4	1	18,000	319,345	64	50	14	----	45,725	41,940

[1]For definition of the industry see table 1, footnote 1. Reports classified by average number of wage earners employed during the year represent a single pit and a single mill reported together. Statistics shown for "Unclassified" represent: Reports for more than one pit; reports on which number of wage earners, by month, was not adequately reported; and reports for central offices reported separately from their associated fuller's-earth operations.
[2]Includes statistics for 30 central-office employees paid $77,978 in Pennsylvania.

TABLE 13.—SELECTED STATISTICS FOR FULLER'S-EARTH OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK AND BY STATE: 1939[1]

STATE AND HOURS PER WEEK	Number of pits	Number of mills	Production of clay (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED				Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members		
United States, total	22	18	186,961	$2,106,721	[2]680	562	[2]116	2	$437,798	[2]$308,183
1 - 34	1	1								
40	9	9	119,974	1,233,848	357	310	46	1	264,955	121,083
41 - 42	1	1								
43 - 44	3	2	33,582	404,882	165	150	15	----	91,738	32,671
Unclassified	8	5	33,405	467,991	[2]158	102	[2]55	1	81,107	[2]154,429
California, Florida, Illinois, Louisiana, Nevada, and Tennessee, total	9	8	69,823	769,638	277	243	34	----	192,801	78,574
40	5	5	[3]36,241	[3]364,756	[3]112	[3]93	[3]19	----	[3]101,063	[3]45,803
43 - 44	3	2	33,582	404,882	165	150	15	----	91,738	32,671
Unclassified	1	1	([3])	([3])	([3])	([3])	([3])	----	([3])	([3])
Georgia, total	3	3	56,391	614,487	168	144	24	----	95,108	59,139
40	2	2	56,391	614,487	168	144	24	----	95,108	59,139
Unclassified	1	1								
Texas, total	10	7	60,747	722,596	205	175	28	2	149,889	92,492
1 - 34	1	1								
40	2	2	29,770	276,939	101	91	9	1	74,638	18,581
41 - 42	1	1								
Unclassified	6	3	30,977	445,657	104	84	19	1	75,251	73,911

[1]For definition of the industry see table 1, footnote 1. Reports were classified by number of hours in the full-time workweek reported for wage earners in that department of the operation for which the largest number of man-hours worked was reported. Statistics shown for "Unclassified" represent reports on which number of hours was not reported and reports for central offices reported separately from their associated fuller's-earth operations.
[2]Includes statistics for 30 central-office employees paid $77,978 in Pennsylvania.
[3]Statistics shown for operations classified in the 40-hour class interval include statistics for "Unclassified."

TABLE 14.—SELECTED STATISTICS FOR FULLER'S-EARTH OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF DAYS ACTIVE DURING THE YEAR: 1939[1]

NUMBER OF DAYS ACTIVE DURING YEAR	Number of pits	Number of mills	Production of clay (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED				Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members		
United States, total	22	18	186,961	$2,106,721	680	562	116	2	$437,798	$308,183
1 - 49	1	1	5,652	59,443	65	56	8	1	14,974	12,719
50 - 99	1	1								
100 - 149	2	2	26,676	217,652	78	67	11	----------	54,319	41,376
150 - 199	2	2								
200 - 224	2	2	99,298	1,067,886	285	247	38	----------	212,723	97,608
225 - 249	1	1								
250 - 274	5	5								
Unclassified	8	4	55,335	761,740	252	192	59	1	155,782	156,480

[1] For definition of the industry see table 1, footnote 1. Reports classified by number of days active represent a single pit and a single preparation plant reported together; such reports were classified by number of days the pit was in operation for production or development purposes during the year. Statistics shown for "Unclassified" represent: Reports for more than one pit; reports on which number of days active was not reported; and reports for central offices reported separately from their associated fuller's-earth operations.

TABLE 15.—SELECTED STATISTICS FOR FULLER'S-EARTH OPERATIONS IN THE UNITED STATES, CLASSIFIED BY OUTPUT PER MAN-HOUR AND BY STATE: 1939[1]

STATE AND TONS (2,000 pounds) OF CLAY PER MAN-HOUR	Number of pits	Number of mills	Production of clay (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED				Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members		
United States, total	22	18	186,961	$2,106,721	[2]680	562	[2]116	2	$437,798	[2]$308,183
Less than 0.20	5	5	23,877	263,041	117	103	13	1	65,720	31,036
0.20 - 0.39	3	3	38,255	334,075	84	75	9	----------	80,859	47,375
Unclassified	14	10	124,829	1,509,605	[2]479	384	[2]94	1	291,219	[2]229,772
California, Florida, Illinois, Louisiana, Nevada, and Tennessee, total	9	8	69,823	769,638	277	243	34	----------	192,801	78,574
Less than 0.20	2	2								
0.20 - 0.39	2	2	69,823	769,638	277	243	34	----------	192,801	78,574
Unclassified	5	4								
Georgia, total	3	3	56,391	614,487	168	144	24	----------	95,108	59,139
Less than 0.20	1	1	56,391	614,487	168	144	24	----------	95,108	59,139
Unclassified	2	2								
Texas, total	10	7	60,747	722,596	205	175	28	2	149,889	92,492
Less than 0.20	2	2	26,666	289,581	83	75	7	1	65,447	41,035
0.20 - 0.39	1	1								
Unclassified	7	4	[3]4,081	435,015	122	100	21	1	84,442	51,457

[1] For definition of the industry see table 1, footnote 1. Reports classified by output per man-hour represent a single pit and single preparation plant reported together. Statistics shown for "Unclassified" represent: Reports for more than 1 pit; reports on which figures were inadequately reported to permit classification; and reports for central offices reported separately from their associated fuller's-earth operations.

[2] Includes statistics for 30 central-office employees paid $77,978 in Pennsylvania.

BENTONITE

The bentonite industry in the United States produced 223,381 short tons of bentonite in 1939. The value of the industry's products at points of production, including a small amount received for milling other minerals, was $1,982,000. Of the total output of bentonite, 152,459 tons, valued at $1,679,000, represents bentonite prepared by such methods as crushing, screening, drying, and grinding. The remainder represents crude bentonite, mostly intended for acid treatment, an activity not covered by the Census of Mineral Industries.

The industry paid $309,000 to an average of 357 wage earners for a total of 687,000 man-hours of labor, or about 45 cents per man-hour. Payments to salaried employees, of whom there were 62 in October of the year, totaled $137,000. Supplies and materials used in 1939 cost $396,000; fuel, $59,000; and purchased electric energy, $26,000. Work done on contract by other concerns, mainly hauling crude bentonite to mills and stripping overburden, cost $38,000. These expenses totaled $966,000. Expenditures for buildings erected and machinery installed during the year amounted to $118,000, about 40 percent of which was accounted for by two companies, which had not begun extensive operations before the end of 1939.

Bentonite was produced in 10 States by 27 companies operating 29 mines (23 open pits and 6 underground mines) and 20 mills or preparation plants. Six pits and 5 mills operated by 8 companies were located in Wyoming; 4 pits and 3 mills operated by 3 companies were located in Texas; 1 pit, 4 underground mines, and 4 mills operated by 6 companies were located in California; 4 pits, 1 underground mine, and 3 mills operated by 4 companies were located in Alabama and Mississippi; the remaining operations were scattered over Arizona, Nevada, Oklahoma, South Dakota, and Utah. Of the 223,381 short tons of bentonite produced in the United States, Wyoming accounted for 34.7 percent; Texas, 8.6 percent; California, 4.9 percent; Alabama and Mississippi, 24.2 percent; and all other States, 27.6 percent.

The growth of bentonite production in the past decade has been extraordinary. Separate statistics for the production of bentonite in the United States first became available for 1930, the United States Bureau of Mines reporting the production of 82,593 short tons in that year. Thus the 1939 output represents an increase of 170 percent over that of 1930. Part of this increase was due to the partial substitution of activated bentonite for naturally active fuller's earth in the petroleum-refining industry. The production of fuller's earth, the statistics for which are summarized in the "Fuller's-earth industry" report, declined almost 50 percent between 1929 and 1939. Both earths are used principally as bleaching or clarifying agents in petroleum refining. Bentonite, artificially activated by acid treatment, has been used to an increasing extent for this purpose. Bentonite is also used extensively by the iron-and-steel industry as a conditioning or revivifying agent for molding sands, by the crude-petroleum and natural-gas industry as a material in drilling mud in the rotary drilling of wells, and by many other industries for various uses, many of which were developed in the last decade.

Of the average of 357 wage earners that were engaged in mining bentonite and preparing it for market, 74 were at operations in Wyoming, 80 in Texas, 51 in California, 70 in Alabama and Mississippi; and 82 in the other 5 States. For the industry as a whole, the standard length of shift was 8 hours. Operations in Wyoming were active the equivalent of 261 full days; in Texas, 163 days; in California, 214 days; in Alabama and Mississippi, 233 days; and in the other States, 198 days.

The total horsepower rating of prime movers and electric motors driven by purchased energy available for use at bentonite mines and mills at the end of the year was nearly 7,000, or an average of about 20 per wage earner. Of the total horsepower rating of power equipment, about two-thirds represented engines or motors used for driving stationary equipment such as mine hoists and crushing and grinding equipment; the remainder represented engines or motors used for driving mobile equipment such as power shovels, trucks, and locomotives. The industry consumed 4,358,000 kilowatt-hours of electricity during the year, a third of which was purchased and the remainder generated by the bentonite-producing companies.

The statistics summarized in this report cover bentonite mines as well as mills engaged in preparing bentonite for market by such methods as crushing, screening, drying, and grinding. The statistics do not cover operations engaged in artificial activation of bentonite.

TABLE 1.—PRINCIPAL STATISTICS FOR THE BENTONITE INDUSTRY IN THE UNITED STATES, BY STATE AND BY TYPE OF OPERATION: 1939[1]

ITEM	United States	STATE					TYPE OF OPERATION	
		Alabama and Mississippi[2]	Arizona, Nevada, Oklahoma, South Dakota, and Utah[3]	California	Texas	Wyoming	Mines only	Mines and preparation plants operated together
Number of operating companies[4]	27	4	9	6	3	8	6	21
Number of pits and mines	29	5	9	5	4	6	[5]8	[6]21
Number of preparation plants	20	3	5	4	3	5	———	20
Number of persons engaged, total	[7]423	79	91	58	95	79	65	358
Wage earners (average for the year, including inactive periods)	357	70	82	51	80	74	57	300
Salaried employees	[7]62	9	6	6	15	5	5	57
Proprietors and firm members	4	———	3	1	———	———	3	1
Performing manual labor	1	———	1	———	———	———	1	———
Production of bentonite:								
Tons of 2,000 pounds	[8]223,381	54,046	61,636	11,028	19,200	77,471	70,472	152,909
Value at pits or mines	$1,894,647	$247,660	$396,563	$197,389	$170,070	$882,965	$214,752	$1,679,895
Value of all products[9]	[8]$1,982,129	$247,660	$396,563	$284,271	$170,670	$862,965	$214,752	$1,767,377
Principal expenses designated below, total	[7]$968,309	$116,176	$202,512	$177,701	$119,861	$305,645	$76,256	$890,053
Wages	$308,890	$46,451	$73,492	$63,440	$41,872	$83,635	$45,439	$263,451
Salaries	[7]$137,149	$24,072	$11,774	$14,662	$30,035	$12,192	$16,212	$120,937
Supplies and materials	$396,487	$27,628	$75,448	$87,852	$37,510	$168,049	$8,524	$387,963
Fuel	$59,366	$8,934	$15,712	$2,662	$7,990	$24,066	$1,476	$57,890
Purchased electric energy	$26,063	$2,755	$12,359	$8,566	$814	$1,569	———	$26,063
Contract work	$38,354	$6,336	$13,727	$519	$1,640	$16,132	$4,605	$33,749
Cost of buildings, machinery, and equipment erected or installed during year	$117,530	$59,994	$34,269	$1,285	$6,267	$15,715	$180	$117,350
Buildings	$14,859	$11,930	$936	———	$1,700	$293	$180	$14,679
Machinery and equipment, total	$102,671	$48,064	$33,333	$1,285	$4,567	$15,422	———	$102,671
Purchased in new condition	$62,987	$35,584	$7,949	$1,285	$4,567	$13,602	———	$62,987
Purchased in used condition	$39,684	$12,480	$25,384	———	———	$1,820	———	$39,684
Total number of man-shifts worked by wage earners	84,504	17,276	18,401	11,554	17,675	19,598	13,315	71,189
Total number of man-hours worked by wage earners	686,916	143,595	142,610	92,055	153,828	154,828	101,103	585,813
Average number of hours worked per shift	8.1	8.3	7.8	8.0	8.7	7.9	7.6	8.2
Average hourly earning of wage earners	$0.45	$0.32	$0.52	$0.69	$0.27	$0.54	$0.45	$0.45
Tons of bentonite produced per man-hour	0.33	0.38	0.43	0.12	0.12	0.50	0.70	0.26
Average number of equivalent full days operations were active	209	233	198	214	163	261	215	209
Horsepower rating of power equipment, total	6,958	948	1,598	1,195	1,187	2,030	566	6,392
Per wage earner	19.5	13.5	19.5	23.4	14.8	27.4	9.9	21.3
Stationary equipment[10]	4,441	522	860	1,004	729	1,326	75	4,366
Mobile equipment[11]	2,517	426	738	191	458	704	491	2,026
Electric energy consumed (thousands of kw.-hrs.), total	4,358	117	568	611	467	2,595	———	4,358
Purchased	1,428	117	568	611	41	91	———	1,428
Generated by reporting companies	2,930	———	———	———	426	2,504	———	2,930

[1]Figures cover only those bentonite-producing operations (mines, preparation plants, or mines and preparation plants operated together) for which the reported value of products, reported principal expenses, or reported cost of buildings, machinery, and equipment amounted to at least $2,500 during the year. No nonproducing operations were reported in the bentonite industry. The smaller producing operations reported a total of only 1,741 short tons of bentonite. Six underground mines were reported: 1 in Alabama, 1 in Arizona, and 4 in California. The preparation plants covered were engaged in crushing, screening, drying, and grinding bentonite; operations treating bentonite chemically were excluded. Two of the preparation plants, engaged principally in milling bentonite, also milled other minerals. Statistics for the milling of a small quantity of bentonite that was mined before 1939—less than 8 percent of the total output—are included, although statistics (other than for quantity) for the mining of this bentonite are excluded.

[2]Alabama, 1 mine and 1 preparation plant; Mississippi, 4 mines and 2 preparation plants.

[3]Arizona, 2 mines; Nevada, 1 mine; Oklahoma, 1 mine and 1 preparation plant; South Dakota, 4 mines and 3 preparation plants; Utah, 1 mine and 1 preparation plant; and Wyoming, 6 mines and 5 preparation plants.

[4]Companies with operations in more than 1 State or more than 1 type of operation are counted only once in the totals.

[5]Represents 6 open pits and 2 underground mines.

[6]Represents 17 open pits, 3 underground mines, and 1 combination (open-pit and underground) mine.

[7]Includes statistics for central-office employees in Ohio and Illinois.

[8]Of the total output of bentonite, 152,459 short tons with a mill value of $1,678,995 represents bentonite prepared during the year by such methods as crushing, screening, drying, and grinding, excluding that treated by acid activation. (See table 2.) Most of the crude bentonite was intended for acid activation.

[9]Figures represent mine value of crude bentonite, the mill value of prepared bentonite, and the value added by milling (or amounts received for milling) minerals other than bentonite.

[10]Aggregate horsepower rating of engines, motors, etc., used for driving stationary or fixed equipment such as mine hoists, crushing or grinding equipment, etc.

[11]Aggregate horsepower rating of engines, motors, etc., used for driving mobile equipment such as power shovels, locomotives, trucks, tractors, etc.

TABLE 2.—QUANTITY AND VALUE OF PRODUCTS OF THE BENTONITE INDUSTRY IN THE UNITED STATES, BY TYPE OF OPERATION, BY STATE, AND BY KIND: 1939[1]

TYPE OF OPERATION AND STATE	Value of all products	PRODUCTION OF BENTONITE				Receipts for services performed for others, including milling
		Prepared		Unprepared		
		Tons of 2,000 pounds	Value	Tons of 2,000 pounds	Value	
United States, total	$1,982,129	152,459	$1,678,995	70,922	$215,652	$87,482
TYPE OF OPERATION						
Mines only[2]	214,752	----	----	70,472	214,752	----
Mines and preparation plants operated together[3]	1,767,377	152,459	1,678,995	450	900	87,482
STATE						
Alabama and Mississippi	247,660	8,059	119,316	46,007	128,344	----
Arizona, Nevada, Oklahoma, South Dakota, and Utah	396,563	37,902	321,659	23,734	74,904	----
California	294,271	10,786	192,544	242	4,845	86,882
Texas	170,670	19,200	170,070	----	----	600
Wyoming	882,965	76,552	875,406	939	7,559	----

[1] For definition of the industry see table 1, footnote 1.
[2] Represents 6 open pits and 2 underground mines.
[3] Represents 17 open pits, 3 underground mines, and 1 combination (open-pit and underground) mine.

TABLE 3.—NUMBER OF WAGE EARNERS IN THE BENTONITE INDUSTRY IN THE UNITED STATES, BY TYPE OF OPERATION, BY STATE, AND BY MONTH: 1939[1]

TYPE OF OPERATION AND STATE	Average for the 12 months	NUMBER RECEIVING PAY DURING PAY-ROLL PERIOD ENDING NEAREST THE 15TH OF THE MONTH											
		January	February	March	April	May	June	July	August	September	October	November	December
United States, total	357	304	297	362	365	357	381	379	343	361	379	391	362
TYPE OF OPERATION													
Mines only, total	57	63	56	58	58	60	59	53	52	50	54	54	62
Open pits	41	49	40	41	43	45	43	39	38	39	35	35	43
Underground mines	16	14	16	17	16	15	16	14	14	11	19	19	19
Mines and preparation plants operated together, total	300	241	241	304	306	297	322	326	291	311	325	337	300
Open pits	233	198	179	242	246	233	256	262	227	259	236	244	229
Underground and combination (open-pit and underground) mines	67	43	62	62	60	64	66	64	64	72	89	93	71
STATE													
Alabama and Mississippi	70	53	48	62	65	82	68	67	65	68	83	90	92
Arizona, Nevada, Oklahoma, South Dakota, and Utah	82	79	67	90	87	74	93	88	74	81	84	79	82
California	51	34	53	54	54	55	55	52	52	53	55	60	37
Texas	80	83	66	88	83	70	73	82	69	83	78	96	84
Wyoming	74	55	63	68	76	76	92	90	83	76	79	66	67

[1] For definition of the industry see table 1, footnote 1.

TABLE 4.—EMPLOYMENT AND WORKING TIME IN THE BENTONITE INDUSTRY IN THE UNITED STATES, BY DEPARTMENT AND BY STATE: 1939[1]

DEPARTMENT	United States	Alabama and Mississippi	Arizona, Nevada, Oklahoma, South Dakota, and Utah	California	Texas	Wyoming
Average number of wage earners on active days, total	403	74	92	54	108	75
At mines, total	164	42	45	19	41	17
Open-pit	128	38	31	2	40	17
Underground	35	4	14	17	----	----
Surface shops and yards	1	----	----	----	1	----
At preparation plants	239	32	47	35	67	58
Average number of equivalent full days operations were active	209	233	198	214	163	261
At mines, total	193	244	137	198	206	177
Open-pit	186	249	91	157	205	177
Underground	217	200	239	203	----	----
Surface shops and yards	240	----	----	----	240	----
At preparation plants	220	219	257	222	156	285
Number of man-shifts worked by wage earners, total	84,504	17,276	18,401	11,554	17,675	19,598
On active days, total	84,209	17,276	18,256	11,554	17,575	19,550
At mines, total	[2] 31,660	10,256	6,184	3,767	8,450	3,003
Open-pit	25,819	9,456	2,856	314	8,210	3,003
Underground	7,601	800	3,328	3,453	----	----
Surface shops and yards	240	----	----	----	240	----
At preparation plants	[3] 52,549	7,020	12,072	7,787	9,125	16,547
On inactive days	295	----	145	----	102	48
Number of man-hours worked by wage earners, total	686,916	143,595	142,610	92,055	153,828	154,828
On active days, total	684,565	143,595	141,450	92,055	153,012	154,453
At mines, total	259,658	84,183	44,872	29,757	76,768	24,078
Open-pit	201,654	77,783	22,436	2,509	74,848	24,078
Underground	56,084	6,400	22,436	27,248	----	----
Surface shops	1,920	----	----	----	1,920	----
At preparation plants	424,907	59,412	96,578	62,298	76,244	130,375
On inactive days	2,351	----	1,160	----	816	375

[1] For definition of the industry see table 1, footnote 1.
[2] All mines reported working only 1 shift.
[3] Of this number, 7,911 man-shifts worked during the second shift and 6,465 during the third shift were reported for 6 preparation plants in South Dakota, Texas, and Wyoming.

TABLE 5.— QUANTITY OF FUEL AND ELECTRIC ENERGY CONSUMED IN THE BENTONITE INDUSTRY IN THE UNITED STATES, BY TYPE OF OPERATION AND BY STATE: 1939 [1]

TYPE OF OPERATION AND STATE	FUEL					ELECTRIC ENERGY (thousands of kilowatt-hours)		
	Anthracite (tons of 2,000 pounds)	Bituminous coal (tons of 2,000 pounds)	Fuel oils (barrels of 42 gallons)	Gasoline and kerosene (gallons)	Natural gas (thousands of cubic feet)	Total	Purchased	Generated by reporting companies
United States, total	8	552	29,417	71,526	66,947	4,358	1,428	2,930
TYPE OF OPERATION								
Mines only, total	----	----	377	2,276	----	----	----	----
Open pits	----	----	377	1,676	----	----	----	----
Underground mines	----	----	----	600	----	----	----	----
Mines and preparation plants operated together, total	8	552	29,040	69,250	66,947	4,358	1,428	2,930
Open pits	----	552	28,040	60,936	62,947	3,757	827	2,930
Underground and combination (open-pit and underground) mines	8	----	1,000	8,314	4,000	601	601	----
STATE								
Alabama and Mississippi	----	----	3,807	2,200	570	117	117	----
Arizona, Nevada, Oklahoma, South Dakota, and Utah	----	510	313	8,981	56,519	568	568	----
California	8	----	----	9,470	4,000	611	611	----
Texas	----	----	2,048	26,654	6,058	467	41	426
Wyoming	----	42	23,249	24,221	----	2,595	91	2,504

[1] For definition of the industry see table 1, footnote 1.

TABLE 6.—NUMBER AND HORSEPOWER RATING OF PRIME MOVERS AND ELECTRIC MOTORS IN THE BENTONITE INDUSTRY IN THE UNITED STATES, BY TYPE OF OPERATION AND BY STATE: 1939 [1]

TYPE OF OPERATION, STATE, AND TYPE OF EQUIPMENT	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY					ELECTRIC MOTORS DRIVEN BY ENERGY GENERATED BY REPORTING COMPANIES	
	Aggregate horsepower	Prime movers [2]		Electric motors driven by purchased energy		Number	Horsepower
		Number	Horsepower	Number	Horsepower		
United States, total	6,958	75	4,690	132	2,268	89	1,086
Stationary	4,441	28	2,378	128	2,063	89	1,086
Mobile	2,517	47	2,312	4	205	----	----
TYPE OF OPERATION							
Mines only, total	566	7	395	3	171	----	----
Stationary	75	2	75	----	----	----	----
Mobile	491	5	320	3	171	----	----
Open pits [3]	491	5	320	3	171	----	----
Underground mines [4]	75	2	75	----	----	----	----
Mines and preparation plants operated together, total	6,392	68	4,295	129	2,097	89	1,086
Stationary	4,366	26	2,303	128	2,063	89	1,086
Mobile	2,026	42	1,992	1	34	----	----
Open pits, total	5,290	62	4,058	78	1,232	89	1,086
Stationary	3,377	23	2,179	77	1,198	89	1,086
Mobile	1,913	39	1,879	1	34	----	----
Underground and combination (open pit and underground) mines, total	1,102	6	237	51	865	----	----
Stationary	989	3	124	51	865	----	----
Mobile	113	3	113	----	----	----	----
STATE							
Alabama and Mississippi, total	948	6	385	25	563	----	----
Stationary	522	2	130	22	392	----	----
Mobile	426	4	255	3	171	----	----
Arizona, Nevada, Oklahoma, South Dakota, and Utah, total	1,598	16	954	34	644	----	----
Stationary	860	4	250	33	610	----	----
Mobile	738	12	704	1	34	----	----
California, total	1,195	8	270	56	925	----	----
Stationary	1,004	4	79	56	925	----	----
Mobile	191	4	191	----	----	----	----
Texas, total	1,187	25	1,142	6	45	27	465
Stationary	729	9	684	6	45	27	465
Mobile	458	14	458	----	----	----	----
Wyoming, total	2,030	22	1,939	11	91	62	621
Stationary	1,326	9	1,235	11	91	62	621
Mobile	704	13	704	----	----	----	----

[1] For definition of the industry see table 1, footnote 1. For definition of terms "Stationary" and "Mobile" see table 1, footnotes 10 and 11.
[2] Includes 2 stationary units driving generators with 475 horsepower rating reported at open pits in Texas, and 5 with 1,000 horsepower rating reported at open pits in Wyoming; all other prime movers were reported as not driving generators. Also includes 1 stationary prime mover with 2 horsepower rating at an underground mine in California reported as ordinarily idle.
[3] Mobile only; no stationary equipment was reported.
[4] Stationary only; no mobile equipment was reported.

TABLE 7.—NUMBER OF SURFACE POWER-LOADING MACHINES IN THE BENTONITE INDUSTRY IN THE UNITED STATES, BY TYPE, BY KIND OF POWER USED, BY SIZE, AND BY STATE: 1939[1]

TYPE OF MACHINE, KIND OF POWER USED, AND SIZE	United States	Alabama and Mississippi	Arizona, Nevada, Oklahoma, South Dakota, and Utah	California	Texas	Wyoming
Power shovels[2 3]	9	---	2	1	2	4
Dragline excavators, total	8	4	2	---	2	---
Kind of power used:						
Electric	1	1	---	---	---	---
Other[2]	7	3	2	---	2	---
Bucket capacity (cu. yds.):						
Less than 3	7	3	2	---	2	---
3 to 5	1	1	---	---	---	---
Other types, total[2 4]	6	1	2	1	---	2

[1]For definition of the industry see table 1, footnote 1. In addition to surface power-loading equipment, 1 piece of miscellaneous power-loading equipment was reported used at underground mines.
[2]Principally operated by internal-combustion engines.
[3]Dipper capacity less than 3 cubic yards.
[4]Includes 2 scraper loaders in Utah (rated capacity between 10 and 25 horsepower), 1 crane or hoist in Mississippi, 1 underground hoist in California, and 1 tractor-bulldozer in Wyoming.

TABLE 8 -SELECTED STATISTICS FOR INCORPORATED AND UNINCORPORATED CONCERNS IN THE BENTONITE INDUSTRY IN THE UNITED STATES, BY STATE: 1939[1]

TYPE OF OWNERSHIP AND STATE	Number of operating companies[2]	Number of pits and mines	Number of preparation plants	Production of bentonite (tons 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
						Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
									Total	Performing manual labor		
United States, total	27	29	20	223,381	$1,982,129	[3]423	357	[3]62	4	1	$308,890	[3]$137,149
Incorporated	24	25	19	198,497	1,877,625	[3]385	327	[3]58	---	---	277,466	[3]128,111
Unincorporated	3	4	1	24,884	104,504	38	30	4	4	1	31,424	9,038
Alabama and Mississippi[4]	4	5	3	54,046	247,660	79	70	9	---	---	46,451	24,072
Arizona, Nevada, Oklahoma, South Dakota, and Utah, total	9	9	5	61,636	396,563	91	82	6	3	1	73,492	11,774
Incorporated	7	8	5	61,636	396,563	91	82	6	3	1	73,492	11,774
Unincorporated	2	3	---									
California, total	6	5	4	11,028	284,271	58	51	6	1	---	63,440	14,662
Incorporated	5	4	3	11,028	284,271	58	51	6	1	---	63,440	14,662
Unincorporated	1	1	1									
Texas[4]	3	4	3	19,200	170,670	95	80	15	---	---	41,872	30,035
Wyoming[4]	8	6	5	77,471	882,965	79	74	5	---	---	83,635	12,192

[1]For definition of the industry see table 1, footnote 1.
[2]Companies with operations in more than 1 State are counted only once in the totals.
[3]Includes statistics for 21 central-office employees paid $44,414 in Illinois and Ohio.
[4]Incorporated only; no unincorporated operating companies were reported.

TABLE 9.—SELECTED STATISTICS FOR BENTONITE OPERATIONS IN THE UNITED STATES, CLASSIFIED BY VALUE OF PRODUCTS AND BY STATE: 1939[1]

STATE AND VALUE OF PRODUCTS	Number of pits and mines	Number of preparation plants	Production of bentonite (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	29	20	223,381	$1,982,129	[2]423	357	[2]62	4	1	$308,890	[2]$137,149
$1 - $19,999	11	6	15,237	86,127	57	52	4	1	1	31,100	6,867
$20,000 - $49,999	7	5	38,219	243,455	122	107	12	3	----------	82,259	20,306
$50,000 - $99,999	4	4	36,041	337,454	64	58	6	-----	----------	53,046	12,580
$100,000 - $249,999	3	2	63,589	464,641	65	58	7	-----	----------	58,270	24,028
$250,000 - $499,999	2	2	70,295	850,452	[2]115	82	[2]33	-----	----------	84,215	[2]73,368
Unclassified	2	1									
Alabama and Mississippi, total	5	3	54,046	247,660	79	70	9	-----	----------	46,451	24,072
$1 - $19,999	2	1	54,046	247,660	79	70	9	-----	----------	46,451	24,072
$20,000 - $49,999	1	1									
$50,000 - $99,999	1	1									
$100,000 - $249,999	1	----------									
Arizona, Nevada, Oklahoma, South Dakota, and Utah, total	9	5	61,636	396,563	91	82	6	3	1	73,492	11,774
$1 - $19,999	4	2	23,927	80,694	32	27	2	3	1	20,749	2,155
$20,000 - $49,999	2	----------									
$50,000 - $99,999	2	2	37,709	315,869	59	55	4	-----	----------	52,743	9,619
$100,000 - $249,999	1	1									
California, total	5	4	11,028	284,271	58	51	6	1	----------	63,440	14,662
$1 - $19,999	2	1	11,028	284,271	58	51	6	1	----------	63,440	14,662
$20,000 - $49,999	2	2									
$100,000 - $249,999	1	1									
Texas, total	4	3	19,200	170,670	95	80	15	-----	----------	41,872	30,035
$20,000 - $49,999	2	2	19,200	170,670	95	80	15	-----	----------	41,872	30,035
Unclassified	2	1									
Wyoming, total	6	5	77,471	882,965	79	74	5	-----	----------	83,635	12,192
$1 - $19,999	3	2	3,247	22,423	15	14	1	-----	----------	7,068	1,200
$50,000 - $99,999	1	1	74,224	860,542	64	60	4	-----	----------	76,567	10,992
$250,000 - $499,999	2	2									

[1] For definition of the industry see table 1, footnote 1. Reports classified by value of products represent a single pit or mine, a single preparation plant, or a single pit or mine and a single preparation plant reported together. Statistics shown for "Unclassified" represent reports for more than one pit or mine, and reports for central offices reported separately from their associated bentonite operations.

[2] Includes statistics for 21 central-office employees paid $44,414 in Illinois and Ohio.

TABLE 10.—SELECTED STATISTICS FOR BENTONITE OPERATIONS IN THE UNITED STATES, CLASSIFIED BY QUANTITY OF BENTONITE PRODUCED AND BY STATE: 1939 [1]

STATE AND QUANTITY OF BENTONITE (tons of 2,000 pounds)	Number of pits and mines	Number of preparation plants	Production of bentonite (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	29	20	223,381	$1,982,129	[2] 423	357	[2] 62	4	1	$308,890	[2] $137,149
1 - 999	8	5	5,902	52,803	34	31	3	-----	-----	17,156	4,555
1,000 - 1,999	1	1									
2,000 - 4,999	4	3	13,805	181,931	70	57	11	2	1	28,080	19,786
5,000 - 9,999	4	2	31,621	147,597	51	47	3	1	-----	41,357	5,327
10,000 - 14,999	3	2	34,409	213,323	50	46	3	1	-----	49,175	7,105
15,000 - 24,999	1	1									
25,000 - 34,999	1	1	119,483	1,037,048	88	81	7	-----	-----	93,104	24,391
35,000 - 49,999	2	1									
Unclassified	5	4	18,161	349,427	[2] 130	95	[2] 35	-----	-----	80,018	[2] 76,005
Alabama and Mississippi, total	5	3	54,046	247,660	79	70	9	-----	-----	46,451	24,072
1 - 999	1	1									
2,000 - 4,999	1	1									
5,000 - 9,999	1	-----	54,046	247,660	79	70	9	-----	-----	46,451	24,072
35,000 - 49,999	1	-----									
Unclassified	1	1									
Arizona, Nevada, Oklahoma, South Dakota, and Utah, total	9	5	61,636	396,563	91	82	6	3	1	73,492	11,774
1 - 999	3	2	1,543	11,190	6	5	1	-----	-----	1,921	955
2,000 - 4,999	1	-----	19,097	105,564	26	22	2	2	1	15,791	3,015
5,000 - 9,999	2	1									
10,000 - 14,999	2	1	40,996	279,809	59	55	3	1	-----	55,780	7,804
15,000 - 24,999	1	1									
California, total	5	4	11,028	284,271	58	51	6	1	-----	63,440	14,662
1 - 999	2	1									
2,000 - 4,999	1	1	11,028	284,271	58	51	6	1	-----	63,440	14,662
Unclassified	2	2									
Texas, total	4	3	19,200	170,670	95	80	15	-----	-----	41,872	30,035
2,000 - 4,999	1	1									
5,000 - 9,999	1	1	19,200	170,670	95	80	15	-----	-----	41,872	30,035
Unclassified	2	1									
Wyoming, total	6	5	77,471	882,965	79	74	5	-----	-----	83,635	12,192
1 - 999	2	1									
1,000 - 1,999	1	1	3,247	22,423	15	14	1	-----	-----	7,068	1,200
10,000 - 14,999	1	1									
25,000 - 34,999	1	1	74,224	860,542	64	60	4	-----	-----	76,567	10,992
35,000 - 49,999	1	1									

[1] For definition of the industry see table 1, footnote 1. Reports classified by quantity of products represent a single pit or mine, a single preparation plant, or a single pit or mine and a single preparation plant reported together. Statistics shown for "Unclassified" represent: Reports for more than 1 pit or mine, reports on which figures were inadequately reported to permit classification, and reports for central offices reported separately from their associated bentonite operations.

[2] Includes statistics for 21 central-office employees paid $44,414 in Illinois and Ohio.

TABLE 11.—SELECTED STATISTICS FOR BENTONITE OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF WAGE EARNERS AND BY STATE: 1939

STATE AND NUMBER OF WAGE EARNERS	Number of pits and mines	Number of preparation plants	Production of bentonite (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	29	20	223,381	$1,982,129	[2] 423	357	[2] 62	4	1	$308,890	[2] $137,149
1 - 5	6	2	13,350	66,884	22	18	2	2	1	8,841	2,155
6 - 20	13	10	130,091	1,108,241	184	166	16	2	———	165,946	42,495
21 - 50	5	5	69,126	699,644	143	129	14	———	———	108,724	26,318
Unclassified	5	3	10,814	107,360	[2] 74	44	[2] 30	———	———	25,379	[2] 66,181
Alabama and Mississippi, total	5	3	54,046	247,660	79	70	9	———	———	46,451	24,072
6 - 20	4	2	54,046	247,660	79	70	9	———	———	46,451	24,072
21 - 50	1	1									
Arizona, Nevada, Oklahoma, South Dakota, and Utah, total	9	5	61,636	396,563	91	82	6	3	1	73,492	11,774
1 - 5	4	1	61,636	396,563	91	82	6	3	1	73,492	11,774
6 - 20	3	2									
21 - 50	1	1									
Unclassified	1	1									
California, total	5	4	11,028	284,271	58	51	6	1	———	63,440	14,662
1 - 5	2	1	11,028	284,271	58	51	6	1	———	63,440	14,662
6 - 20	2	2									
21 - 50	1	1									
Texas, total	4	3	19,200	170,670	95	80	15	———	———	41,872	30,035
6 - 20	1	1	19,200	170,670	95	80	15	———	———	41,872	30,035
21 - 50	1	1									
Unclassified	2	1									
Wyoming, total	6	5	77,471	882,965	79	74	5	———	———	83,635	12,192
6 - 20	3	3	37,909	593,443	42	39	3	———	———	39,070	8,470
21 - 50	1	1	39,562	289,522	37	35	2	———	———	44,565	3,722
Unclassified	2	1									

[1] For definition of the industry see table 1, footnote 1. Reports classified by average number of wage earners employed during the year represent a single pit or mine, a single preparation plant, or a single pit or mine and a single preparation plant reported together. Statistics shown for "Unclassified" represent: Reports for more than one pit or mine; reports on which number of wage earners, by month, was not adequately reported; and reports for central offices reported separately from their associated bentonite operations.

[2] Includes statistics for 21 central-office employees paid $44,414 in Illinois and Ohio.

TABLE 12.—SELECTED STATISTICS FOR BENTONITE OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK AND BY STATE: 1939 [1]

STATE AND HOURS PER WEEK	Number of pits and mines	Number of preparation plants	Production of bentonite (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	29	20	223,381	$1,982,129	[2] 423	357	[2] 62	4	1	$308,890	[2] $137,149
40	5	4	24,560	323,359	83	75	7	1	———	86,006	18,974
41 - 42	11	5	65,352	474,923	160	138	19	3	1	87,637	41,944
43 - 44	7	6	100,683	630,300	107	95	12	———	———	94,186	27,352
Unclassified	6	5	32,786	353,547	[2] 73	49	[2] 24	———	———	41,061	[2] 50,879
Alabama and Mississippi, total	5	3	54,046	247,660	79	70	9	———	———	46,451	24,072
40	1	———	54,046	247,660	79	70	9	———	———	46,451	24,072
41 - 42	1	1									
43 - 44	2	1									
Unclassified	1	1									
Arizona, Nevada, Oklahoma, South Dakota, and Utah, total	9	5	61,636	396,563	91	82	6	3	1	73,492	11,774
41 - 42	5	1	41,425	238,681	51	46	2	3	1	39,319	5,704
43 - 44	3	3	20,211	157,882	40	36	4	———	———	34,173	6,070
Unclassified	1	1									
California, total	5	4	11,028	284,271	58	51	6	1	———	63,440	14,662
40	3	3	11,028	284,271	58	51	6	1	———	63,440	14,662
41 - 42	1	———									
Unclassified	1	1									
Texas, total	4	3	19,200	170,670	95	80	15	———	———	41,872	30,035
40	1	1	19,200	170,670	95	80	15	———	———	41,872	30,035
41 - 42	3	2									
Wyoming, total	6	5	77,471	882,965	79	74	5	———	———	83,635	12,192
41 - 42	1	1	48,885	373,418	55	51	4	———	———	56,899	8,727
43 - 44	2	2									
Unclassified	3	2	28,586	509,547	24	23	1	———	———	26,736	3,465

[1] For definition of the industry see table 1, footnote 1. Reports were classified by number of hours in the full-time workweek reported for wage earners in that department of the operation for which the largest number of man-hours worked was reported. Statistics shown for "Unclassified" represent reports on which number of hours was not reported; and reports for central offices reported separately from their associated bentonite operations.

[2] Includes statistics for 21 central-office employees paid $44,414 in Illinois and Ohio.

TABLE 13.—SELECTED STATISTICS FOR BENTONITE OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF DAYS ACTIVE DURING THE YEAR: 1939 [1]

NUMBER OF DAYS ACTIVE DURING YEAR	Number of pits and mines	Number of preparation plants	Production of bentonite (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	29	20	223,381	$1,982,129	423	357	62	4	1	$308,890	$137,149
1 - 49	2	1	13,086	89,677	22	20	2	----	----	21,751	3,300
50 - 99	1	1									
100 - 149	4	4	31,652	361,045	67	63	4	----	----	57,597	9,979
150 - 199	3	2	16,182	146,896	57	50	7	----	----	22,977	12,073
200 - 224	2	1	60,053	523,465	75	68	6	1	----	85,009	11,746
225 - 249	2	2									
250 - 274	3	2									
275 - 299	1	----	23,074	100,424	57	49	5	3	1	46,165	12,550
325 and over	1	----									
Unclassified	10	7	79,334	760,622	145	107	38	----	----	75,391	87,501

[1] For definition of the industry see table 1, footnote 1. Reports classified by number of days active represent a single pit or mine, a single preparation plant, or a single pit or mine and a single preparation plant reported together; such reports for a single pit or mine or a single preparation plant were classified by number of days the pit or mine or preparation plant was in operation for production or development purposes during the year; such reports for a single pit or mine and a single preparation plant reported together were classified by number of days the pit or mine was in operation during the year. Statistics shown for "Unclassified" represent: Reports for more than one pit or mine; reports on which number of days active was not reported; and reports for central offices reported separately from their associated bentonite operations.

TABLE 14.—SELECTED STATISTICS FOR BENTONITE OPERATIONS IN THE UNITED STATES, CLASSIFIED BY OUTPUT PER MAN-HOUR AND BY STATE: 1939 [1]

STATE AND TONS (2,000 POUNDS) OF BENTONITE PER MAN-HOUR	Number of pits and mines	Number of preparation plants	Production of bentonite (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	29	20	223,381	1,982,129	[2] 423	357	[2] 62	4	1	$308,890	[2] $137,149
Less than 0.20	4	3	7,321	89,495	58	47	10	1	----	23,158	17,061
0.20 - 0.39	5	4	98,507	696,505	139	129	9	1	----	135,130	18,614
0.40 - 0.59	3	2									
Unclassified	17	11	117,553	1,196,129	[2] 226	181	[2] 43	2	1	150,602	[2] 101,474
Alabama and Mississippi, total	5	3	54,046	247,660	79	70	9	----	----	46,451	24,072
0.20 - 0.39	2	1	54,046	247,660	79	70	9	----	----	46,451	24,072
Unclassified	3	2									
Arizona, Nevada, Oklahoma, South Dakota, Utah, total	9	5	61,636	396,563	91	82	6	3	1	73,492	11,774
Less than 0.20	1	1									
0.20 - 0.39	2	2	30,880	187,837	54	49	4	1	----	48,931	6,070
0.40 - 0.59	1	----									
Unclassified	5	2	30,756	208,726	37	33	2	2	1	24,561	5,704
California, total	5	4	11,028	284,271	58	51	6	1	----	63,440	14,662
Less than 0.20	2	1	11,028	284,271	58	51	6	1	----	63,440	14,662
Unclassified	3	3									
Texas, total	4	3	19,200	170,670	95	80	15	----	----	41,872	30,035
Less than 0.20	1	1									
0.20 - 0.39	1	1	19,200	170,670	95	80	15	----	----	41,872	30,035
Unclassified	2	1									
Wyoming, total	6	5	77,471	882,965	79	74	5	----	----	83,635	12,192
0.40 - 0.59	2	3	77,471	882,965	79	74	5	----	----	83,635	12,192
Unclassified	4	2									

[1] For definition of the industry, see table 1, footnote 1. Reports classified by output per man-hour represent a single pit or mine, a single preparation plant, or a single pit or mine and a single preparation plant reported together. Statistics shown for "Unclassified" represent: Reports for more than 1 pit or mine, reports on which figures were inadequately reported to permit classification, and reports for central offices reported separately from their associated bentonite operations.

[2] Includes statistics for 21 central-office employees paid $44,414 in Illinois and Ohio.

ASBESTOS

The asbestos industry in the United States produced 15,423 short tons of asbestos of various grades with a value of $492,487 at points of production.

The United States is the world's largest manufacturer of asbestos products, but only a small part of the crude asbestos used in 1939 came from domestic mines. Nearby deposits in Canada, the world's largest producer of raw asbestos, supplied most of our imports.

Asbestos is a unique mineral consisting of fibers that can be spun and woven into textiles in a manner similar to that employed in using vegetable fibers. The mineral composition of asbestos makes it fireproof, weatherproof, and resistant to chemical action, and it is essential in the manufacture of brake-band linings and clutch facings for automobiles and trucks. It is also used in many heat-insulating and fireproofing materials.

The asbestos industry paid $151,000 in wages--an average of 44 cents per man-hour. Salaried employees were paid $18,000. Supplies and materials consumed during the year cost $86,000; fuel, $22,000; purchased electric energy, $40,000; and work done on contract by other concerns, $3,000. Buildings, machinery, and equipment costing about $20,000 were erected or installed during the year.

The number of wage earners employed by the industry averaged 160. In addition, 9 salaried employees were reported for October. Wage earners worked a total of 343,532 man-hours, working an average of 8.0 hours per shift. For the industry as a whole, operations were active the equivalent of 157 full days during the year.

Production of asbestos was reported by nine companies operating nine mines and seven mills. Operations in Arizona and Vermont produced chrysotile asbestos and those in Georgia and Maryland amphibole asbestos. Less than 3 percent of the production was amphibole asbestos, which is especially resistant to chemicals and high temperatures and is used for special products such as acid filters. More than 94 percent of the total production of chrysotile and amphibole asbestos was obtained from open-cut mines.

Power equipment in use or available for use at the end of the year had an aggregate rated capacity of 4,179 horsepower, an average of 26 horsepower per wage earner. Of the total horsepower rating reported, over 3,712 represented the rating of engines or motors used for driving fixed or stationary equipment such as milling machines and electric generators. The remaining horsepower was used for driving mobile or portable equipment such as clamshell loaders, power shovels, and trucks.

For distribution of asbestos operations by value of products, number of wage earners, number of days active, number of hours per wage earner in the full-time workweek, and by type of ownership, see General Summary tables 8, 15, 17, 18, and 26 respectively.

TABLE 1.—PRINCIPAL STATISTICS FOR THE ASBESTOS INDUSTRY IN THE UNITED STATES: 1939, 1929, 1919, 1909, 1902, 1889, AND 1880[1]

(For producing operations only)

ITEM	1939	1929	1919	1909	1902	1889	1880
Number of operating companies[2]	9	(3)	(3)	5	4	(3)	(3)
Number of mines	9	11	11	20	4	(3)	7
Production of asbestos (tons of 2,000 pounds)	15,423	3,440	(3)	(3)	2,505	30	150
Value of all products, total	$492,487	$397,482	$249,839	$65,140	[4]$46,200	[4]$1,800	[4]$4,312
Value of asbestos produced	$492,487	$397,482	$249,839	(3)	$46,200	$1,800	$4,312
Value of other products and services rendered	----------	----------	----------	(3)	(3)	(3)	(3)
Number of persons engaged, total	172	211	165	63	[4]30	[4]12	[4]17
Wage earners (average for the year, including inactive periods)	160	195	146	54	[5]23	[6]9	17
Salaried employees	9	16	14	9	7	3	
Proprietors and firm members	3	----------	5	----------	(3)	(3)	(3)
Performing manual labor	----------	----------	1	----------	(3)	(3)	(3)
Principal expenses designated below, total	$320,092	$348,586	$173,207	$65,249	$19,111	[4]$3,225	[4]$1,400
Wages	$130,579	$236,789	$91,672	$31,189	$8,250	$2,700	$1,400
Salaries	$17,883	$34,280	$28,903	$10,140	$2,628		
Supplies and materials	$86,293	$36,201	$47,202	$23,120			(3)
Fuel	$21,601	$26,756	$3,380	[7]$400	[7]$8,233	[7]$525	(3)
Purchased electric energy	$40,259	$12,560	[7]$2,050				(3)
Contract work	$3,477	$2,000	----------	$400	----------	(3)	(3)
Cost of machinery and equipment erected or installed during year	$12,794	$89,257	(3)	(3)	(3)	(3)	(3)
Horsepower rating of prime movers and electric motors driven by purchased energy, total	4,179	2,114	420	380	105	(3)	(3)
Per wage earner	26.1	10.8	2.9	7.0	4.6	(3)	(3)
Prime movers	1,001	695	355	380	105	(3)	(3)
Electric motors driven by purchased energy	3,178	1,419	65	----------	----------	(3)	(3)
Horsepower rating of electric motors driven by energy generated by reporting companies	125	40	----------	----------	----------	(3)	(3)
Fuels consumed:							
Anthracite (tons of 2,000 pounds)	----------	----------	----------	(3)	(3)	(3)	(3)
Bituminous coal (tons of 2,000 pounds)	----------	592	300	(3)	(3)	(3)	(3)
Fuel oils (barrels of 42 gallons)	3,993	3,405	300	(3)	(3)	(3)	(3)
Gasoline and kerosene (gallons)	54,625	16,250	4,200	(3)	(3)	(3)	(3)
Natural gas (thousands of cubic feet)	----------	----------	----------	(3)	(3)	(3)	(3)
Electric energy consumed (thousands of kw.-hrs.), total	4,535	1,007	(3)	(3)	(3)	(3)	(3)
Purchased	4,526	988	(3)	(3)	(3)	(3)	(3)
Generated by reporting companies	9	19	(3)	(3)	(3)	(3)	(3)

[1]Statistics cover mining and milling operations engaged in the production of crude asbestos rock and prepared asbestos recovered from crude material by cobbing and milling, including crushing, screening, and air-separation. Figures for 1939 cover only those producing operations (mines, mills, or mines and mills operated together) for which the value of products, reported principal expenses, or cost of buildings, machinery, and equipment during the year amounted to at least $2,500. Figures for 1929 represent "enterprises" for which the total value of products or cost of development work was at least $2,500; the corresponding minimum for "enterprises" in 1919 was $500 for value of products and $5,000 for cost of development work. No minimum was placed on the size of operations included for 1909, 1902, 1889, and 1880. The 1939 figures exclude statistics for 495 short tons of asbestos with a total value of $5,648 produced at small asbestos operations for which the value of products, reported principal expenses, or cost of buildings, machinery, and equipment during the year was less than $2,500. No nonproducing operations were reported for 1939.

[2]For 1939 and 1909, companies that submitted more than one report are counted only once in the totals.

[3]Not available.

[4]Excludes statistics for items for which information was not available as indicated by footnotes.

[5]On schedules for the 1902 census, concerns were instructed that "The average number employed during the year is the number that would be required, at continuous employment for the twelve months, to produce the quantity of products reported." "In editing the schedules...the figures for the average number of employees were reduced to a 300-day basis whenever the schedules showed them to be the average number for a shorter period; when it was evident that the employees had worked more than 300 days, the average number for the longer period was allowed to stand."

[6]The 1889 census schedule called for "average number employed," presumably an average for active periods; and requested that figures for wage earners "include those employed by contractors and subcontractors."

[7]For 1919 and 1909, statistics include amounts paid for purchased power other than electric. Statistics for cost of purchased power for 1902 and 1889 were not explicitly requested but probably are included in part in the figures reported for supplies and materials.

TABLE 2.—PRINCIPAL STATISTICS FOR THE ASBESTOS INDUSTRY IN THE UNITED STATES, BY STATE: 1939 [1]

ITEM	United States	Arizona	Georgia, Maryland, and Vermont [2]	ITEM	United States	Arizona	Georgia, Maryland, and Vermont [2]
Number of operating companies	9	6	3	Cost of buildings, machinery, and equipment erected or installed during year	$19,841	$2,276	$17,565
Number of mines	9	6	3	Buildings	$7,047	———	$7,047
Number of mills	7	5	2	Machinery and equipment, total	$12,794	$2,276	$10,518
Number of persons engaged, total	172	49	123	Purchased in new condition	$10,858	$340	$10,518
				Purchased in used condition	$1,936	$1,936	———
Wage earners (average for the year)	160	42	118	Total number of man-shifts worked by wage earners	42,941	8,638	34,303
Salaried employees	9	5	4	Total number of man-hours worked by wage earners	343,532	69,108	274,424
Proprietors and firm members [3]	3	2	1	Average number of hours worked per shift	8.0	8.0	8.0
				Average hourly earning of wage earners	$0.44	$0.43	$0.44
Production of asbestos (tons of 2,000 pounds) [4]	15,423	1,024	14,399	Tons of asbestos produced per man-hour	0.045	0.015	0.052
Value of all products [5]	$492,487	$62,570	$429,917	Average number of equivalent full days operations were active	157	151	158
Principal expenses designated below, total	$320,092	$48,814	$271,278	Horsepower rating of power equipment, total	4,179	833	3,346
Wages	$150,579	$29,376	$121,203	Per wage earner	26.1	19.8	28.4
Salaries	$17,883	$7,973	$9,910	Stationary equipment	3,712	645	3,067
Supplies and materials	$86,293	$7,121	$79,172	Mobile equipment	467	188	279
Fuel	$21,601	$3,998	$17,603	Electric energy consumed (thousands of kw.-hrs.), total	4,535	15	4,520
Purchased electric energy	$40,259	$346	$39,913	Purchased	4,526	6	4,520
Contract work	$3,477	———	$3,477	Generated by reporting companies	9	9	———

[1] For definition of the industry see table 1, footnote 1.
[2] Georgia, 1 mine and 1 mill; Maryland, 1 mine; and Vermont, 1 mine and 1 mill.
[3] No proprietors performing manual labor were reported.
[4] Crude asbestos rock and prepared asbestos recovered from crude material by cobbing and milling. Over 97 percent of the production reported represented chrysotile asbestos and the remainder represented amphibole asbestos.
[5] Represents the total value at mine of crude asbestos rock and prepared asbestos. No secondary products or services performed for others were reported.

TABLE 3.—NUMBER OF WAGE EARNERS IN THE ASBESTOS INDUSTRY IN THE UNITED STATES, BY STATE AND BY MONTH: 1939 [1]

STATE	Average for the 12 months	NUMBER RECEIVING PAY DURING PAY-ROLL PERIOD ENDING NEAREST THE 15TH OF THE MONTH											
		January	February	March	April	May	June	July	August	September	October	November	December
United States	160	69	91	84	108	160	226	231	230	221	218	198	88
Arizona	42	36	48	39	38	47	45	48	46	31	35	35	56
Georgia, Maryland, and Vermont	118	33	43	45	70	113	181	183	184	190	183	163	32

[1] For definition of the industry see table 1, footnote 1.

TABLE 4.—EMPLOYMENT AND WORKING TIME IN THE ASBESTOS INDUSTRY IN THE UNITED STATES, BY DEPARTMENT AND BY STATE: 1939 [1]

DEPARTMENT	United States	Arizona	Georgia, Maryland, and Vermont	DEPARTMENT	United States	Arizona	Georgia, Maryland, and Vermont
Average number of wage earners on active days, total	240	53	187	Number of man-shifts worked by wage earners, total	42,941	8,638	34,303
				On active days, total	37,645	8,028	29,617
At mines, total	131	38	93				
				At mines, total	20,478	5,535	14,943
Underground	33	33	———	Underground	5,343	5,343	———
Open-pit	72	———	72	Open-pit	11,667	———	11,667
Surface shops and yards	26	5	21	Surface shops and yards	3,468	192	3,276
At mills	109	15	94	At mills	17,167	2,493	14,674
				On inactive days	5,296	610	4,686
Average number of equivalent full days operations were active	157	151	158	Number of man-hours worked by wage earners, total	343,532	69,108	274,424
				On active days, total	301,164	64,228	236,936
At mines, total	156	146	161				
				At mines, total	163,829	44,285	119,544
Underground	162	162	———	Underground	42,747	42,747	———
Open-pit	162	———	162	Open-pit	93,336	———	93,336
Surface shops and yards	133	38	156	Surface shops and yards	27,746	1,538	26,208
At mills	157	166	156	At mills	137,335	19,943	117,392
				On inactive days	42,368	4,880	37,488

[1] For definition of the industry see table 1, footnote 1.

TABLE 5.—QUANTITY OF FUEL AND ELECTRIC ENERGY CONSUMED IN THE ASBESTOS INDUSTRY IN THE UNITED STATES, BY STATE AND BY KIND: 1939[1]

STATE	FUEL[2]		ELECTRIC ENERGY (thousands of kilowatt hours)		
	Fuel oils (barrels of 42 gallons)	Gasoline and kerosene (gallons)	Total	Purchased	Generated by reporting companies
United States, total	3,993	54,625	4,535	4,526	9
Arizona	148	18,000	15	6	9
Georgia, Maryland, and Vermont	3,845	36,625	4,520	4,520	----

[1] For definition of the industry see table 1, footnote 1.
[2] No consumption of anthracite, bituminous coal, or natural gas was reported.

TABLE 6.—NUMBER AND HORSEPOWER RATING OF PRIME MOVERS AND ELECTRIC MOTORS IN THE ASBESTOS INDUSTRY IN THE UNITED STATES, BY TYPE AND BY STATE: 1939[1]

STATE AND TYPE OF EQUIPMENT	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY									ELECTRIC MOTORS DRIVEN BY ENERGY GENERATED BY REPORTING COMPANIES	
	Aggregate horsepower	Prime movers[2]						Electric motors driven by purchased energy			
		Total		Driving generators		Not driving generators					
		Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower
United States, total	4,179	26	1,001	3	182	23	819	148	3,178	15	125
Stationary[3]	3,712	17	649	3	182	14	467	146	3,083	15	125
Mobile[4]	467	9	352	----	----	9	352	2	115	----	----
Arizona, total	833	20	762	3	182	17	580	4	71	15	125
Stationary[3]	645	14	574	3	182	11	392	4	71	15	125
Mobile[4]	188	6	188	----	----	6	188	----	----	----	----
Georgia, Maryland, and Vermont, total	3,346	6	239	----	----	6	239	144	3,107	----	----
Stationary[3]	3,067	3	75	----	----	3	75	142	2,992	----	----
Mobile[4]	279	3	164	----	----	3	164	2	115	----	----

[1] For definition of the industry see table 1, footnote 1.
[2] No prime movers ordinarily idle were reported.
[3] Horsepower rating of engines, motors, etc., used for driving stationary or fixed equipment such as milling machines, electric generators, etc.
[4] Horsepower rating of engines, motors, etc., used for driving mobile or portable equipment such as clamshell loaders, power shovels, trucks, etc.

BARITE

The barite industry in the United States produced 348,000 short tons of barite in 1939.[1] The total value of products was $2,065,000, including $55,000 representing the value of mineral pigments, sand and gravel, iron ore, and lead ore obtained as secondary products at barite operations.

One of the principal uses of barite is in the manufacture of lithopone, a mixture of barium sulfate and zinc sulfide used as a white paint pigment and as a filler in the manufacture of linoleum, rubber goods, and other products. Ground barite is used as a filler in numerous products, such as oilcloth, paper, and rubber; as a pigment in paint; in the manufacture of glass; and as a constituent of drilling mud for use in drilling oil and gas wells. Barite is also used in the manufacture of precipitated barium sulfate, precipitated barium carbonate, barium peroxide, and other chemicals.

Barite was produced in 1939 at 47 mines and 32 plants in the United States. Forty-four of the mines employed open-cut mining methods and the remaining 3 were underground operations. The principal producing States, in order of their importance, were Missouri, Georgia, and Tennessee; the total quantity of barite produced at operations in these three States represented over 80 percent of the output of the industry. Production was also reported at operations in Alabama, California, Colorado, Nevada, South Carolina, and Virginia.

PRINCIPAL EXPENSES

The barite industry paid $597,000 in wages to an average of 792 wage earners during 1939. Salaried employees were paid $155,000. Supplies and materials consumed during the year cost $246,000; fuel, $94,000; purchased electric energy, $52,000; and work done on contract by other concerns, $21,000. Buildings, machinery, and equipment costing $127,000 were erected or installed during the year.

EMPLOYMENT AND WORKING TIME

The number of wage earners employed by the industry, which averaged 792 for the year, varied from a low of 681 in January to a peak of 853 in July. In addition, 62 salaried employees were reported for October. The largest number of employees was in Missouri, where the average number of wage earners was 328; the average was 199 in Tennessee, 183 in Georgia, 16 in Nevada, and 66 in the five other States. For the industry as a whole, wage earners worked a total of 1,439,000 man-hours and earned an average of 41 cents per man-hour. The average length of shift was 7.9 hours. Operations were active the equivalent of 216 full days during the year. Most operations worked only one shift per day; however, for a part of the year six operations were reported working two shifts per day and two operations three shifts per day. Of the total number of man-shifts worked during the year on active days, over 90 percent was worked during the first shift.

POWER EQUIPMENT

Power equipment in use or available for use at the end of 1939 had an aggregate rating of 10,452 horsepower--an average of about 13 horsepower per wage earner. Of the total, 8,303 horsepower represented the rating of prime movers such as gasoline, Diesel, and steam engines and 2,149 that of electric motors driven by purchased energy. About 56 percent of the total horsepower represented the rating of power units for driving mobile equipment such as power shovels, dragline excavators, clamshell loaders, and trucks; the remaining 44 percent was for driving stationary or fixed equipment such as mine hoists, electric generators, and washing-plant equipment.

At the end of 1939, operations in the industry were equipped with 44 power shovels—6 driven by steam engines, 36 by internal-combustion engines, and 2 by electric motors; 5 dragline excavators driven by internal-combustion engines; and 3 clamshell or orange-peel loaders—2 driven by steam engines and 1 by an internal-combustion engine. In addition, 4 scraper loaders were reported—3 driven by internal-combustion engines and 1 by electricity.

The industry consumed 3,393,000 kilowatt-hours of electricity in 1939, of which over 99 percent was purchased and less than 1 percent generated by the reporting companies. The total consumption of coal during the year was 2,695 short tons; fuel oils, 7,645 barrels; gasoline and kerosene, 402,221 gallons; and natural gas, 7,340,000 cubic feet.

[1] These statistics do not include 28,266 tons of barite valued at $176,401 produced by small operations for which neither the value of products, nor reported principal expenses, nor cost of buildings, machinery, and equipment during the year amounted to $2,500 (see table 1, footnote 1).

TABLE 1.—PRINCIPAL STATISTICS FOR THE BARITE INDUSTRY IN THE UNITED STATES: 1939, 1929, 1919, 1909, 1902, 1889, AND 1880[1]

(For producing operations only)

ITEM	1939	1929	1919	1909	1902	1889	1880
Number of operating companies[2]	37	(3)	(3)	23	42	(3)	(3)
Number of mines	47	44	98	42	49	(3)	6
Production of barite (tons of 2,000 pounds)	348,022	271,503	(3)	(3)	61,668	21,460	3,608
Value of all products, total	$2,065,048	$1,801,314	$1,574,745	$224,766	[4]$203,154	[4]$106,313	[4]$37,491
Barite produced	$2,010,410	$1,793,655	$1,556,429	(3)	$203,154	$106,313	$37,491
Other products and services	$54,638	$7,659	$18,316	(3)	(3)	(3)	(3)
Number of persons engaged, total	870	924	1,071	282	[4]364	[4]215	[4]63
Wage earners (average for the year)	792	844	919	240	[5]336	[5]204	63
Salaried employees	82	71	59	19	28	[7]11	
Proprietors and firm members	16	9	93	23	(3)	(3)	(3)
Performing manual labor	4	(3)	3	11	(3)	(3)	(3)
Principal expenses designated below, total	$1,165,988	$1,146,920	$1,177,391	$153,063	$154,216	[4]$62,724	[4]$8,002
Wages	$597,140	$648,488	$768,847	$90,310	$130,285	$54,524	$7,802
Salaries	$155,219	$185,914	$110,111	$20,183	$15,159		
Supplies and materials	$246,423	$154,822	$218,582	$21,756			
Fuel	$93,535	$57,576	$50,389	[8]$6,468	[8]$7,772	[8]$8,200	[8]$200
Purchased electric energy	$52,195	$75,686	[8]$19,335				
Contract work	$21,476	$24,454	$10,127	$14,346	$1,000	(3)	(3)
Cost of machinery and equipment erected or installed during year	$96,104	$154,065	(3)	(3)	(3)	(3)	(3)
Horsepower rating of prime movers and electric motors driven by purchased energy, total	10,452	6,066	3,029	262	110	(3)	(3)
Per wage earner	13.2	7.2	3.3	1.1	0.3	(3)	(3)
Prime movers	8,303	2,698	2,049	262	110	(3)	(3)
Electric motors driven by purchased energy	2,149	3,368	980	--------	--------	(3)	(3)
Horsepower rating of electric motors driven by energy generated by reporting companies	102	113	225	--------	--------	(3)	(3)
Fuels consumed:							
Anthracite (tons of 2,000 pounds)	188	--------	--------	(3)	(3)	(3)	(3)
Bituminous coal (tons of 2,000 pounds)	2,507	8,703	5,874	(3)	(3)	(3)	(3)
Fuel oils (barrels of 42 gallons)	7,645	3,120	83	(3)	(3)	(3)	(3)
Gasoline and kerosene (gallons)	402,221	92,259	27,678	(3)	(3)	(3)	(3)
Natural gas (thousands of cubic feet)	7,340	--------	--------	(3)	(3)	(3)	(3)
Electric energy consumed (thousands of kw.-hrs.), total	3,393	5,707	(3)	(3)	(3)	(3)	(3)
Purchased	3,372	5,649	(3)	(3)	(3)	(3)	(3)
Generated by reporting companies	21	58	(3)	(3)	(3)	(3)	(3)

[1]The barite industry covers mines engaged in producing barite and includes associated preparation plants engaged principally in washing, jigging, and tabling barite; statistics for barite grinding and the manufacture of barium products are excluded for 1939 and 1929. The statistics for 1919 and earlier years, however, may cover some barite grinding at the mines. Figures for 1939 cover only those producing operations (mines, plants, or mines and plants operated together) for which the value of products, reported principal expenses, or cost of buildings, machinery, and equipment erected or installed during the year amounted to at least $2,500. Figures for 1929 cover only "enterprises" for which the value of products or cost of development work amounted to at least $2,500; the corresponding minimum for 1919 was $500 for value of products and $5,000 for cost of development work. No minimum was placed on the size of operations included for 1909, 1902, 1889, and 1880. Smaller operations (located in Alabama, Arizona, California, Colorado, Missouri, Montana, and Tennessee) reported the production of 28,266 tons of barite, valued at $176,401, in 1939. No nonproducing operations were reported for 1939.

[2]For 1939 and 1909, companies that submitted more than one report are counted only once in the totals.

[3]Not available.

[4]Excludes statistics for items for which information was not available as indicated by footnotes.

[5]On schedules for the 1902 census, concerns were instructed that "The average number employed during the year is the number that would be required, at continuous employment for the twelve months, to produce the quantity of products reported." "In editing the schedules ... the figures for the average number of employees were reduced to a 300-day basis whenever the schedules showed them to be the average number for a shorter period; when it was evident that the employees had worked more than 300 days, the average number for the longer period was allowed to stand."

[6]The 1889 census schedule called for "average number employed," presumably an average for active periods; and requested that figures for wage earners "include those employed by contractors and subcontractors."

[7]Represents foremen only.

[8]For 1919 and 1909, statistics include amounts paid for purchased power other than electric. Statistics for cost of purchased power for 1902, 1889, and 1880 were not explicitly requested but probably are included in part in the figures reported for supplies and materials.

TABLE 2.—PRINCIPAL STATISTICS FOR THE BARITE INDUSTRY IN THE UNITED STATES, BY STATE: 1939

ITEM	United States	Georgia	Missouri	Nevada	Tennessee	Other States[2]
Number of operating companies[3]	37	7	17	4	5	6
Number of mines	47	7	23	4	6	7
Number of preparation plants	32	7	17	———	5	3
Number of persons engaged, total	870	199	365	20	210	76
Wage earners (average for the year)	792	183	328	16	199	66
Salaried employees	62	12	28	3	9	10
Proprietors and firm members	16	4	9	1	2	———
Performing manual labor	4	1	2	———	1	———
Production of barite:						
Tons of 2,000 pounds[4]	348,022	95,235	127,408	16,592	56,997	51,790
Value at mines or plants[5]	$2,010,410	$447,741	$828,925	$61,298	$369,997	$302,449
Value of all products	[6] $2,065,048	$494,387	$836,917	$61,298	$369,997	$302,449
Principal expenses designated below, total	$1,165,988	$306,888	$463,576	$28,415	$240,590	$126,519
Wages	$597,140	$129,651	$265,262	$12,775	$120,021	$69,431
Salaries	$155,219	$37,930	$68,597	$2,999	$27,196	$18,497
Supplies and materials	$246,423	$74,754	$83,874	$5,325	$54,297	$28,173
Fuel	$93,535	$33,973	$20,552	$1,288	$33,332	$4,410
Purchased electric energy	$52,195	$20,967	$21,146	———	$5,744	$4,338
Contract work	$21,476	$9,613	$4,145	$6,048	———	$1,670
Cost of buildings, machinery, and equipment erected or installed during year	$126,726	$24,335	$51,198	———	$36,913	$14,280
Buildings	$30,822	$4,258	$6,882	———	$13,766	$5,916
Machinery and equipment, total	$96,104	$20,077	$44,516	———	$23,147	$8,364
Purchased in new condition	$56,789	$16,042	$18,315	———	$20,947	$1,485
Purchased in used condition	$39,315	$4,035	$26,201	———	$2,200	$6,879
Total number of man-shifts worked by wage earners	181,885	48,961	70,800	2,972	44,317	14,835
Total number of man-hours worked by wage earners	1,439,006	401,791	571,424	21,875	325,536	118,380
Average number of hours worked per shift	7.9	8.2	8.1	7.4	7.3	8.0
Average hourly earning of wage earners	$0.41	$0.32	$0.46	$0.58	$0.37	$0.59
Tons of barite produced per man-hour	0.242	0.237	0.223	0.758	0.175	0.437
Average number of equivalent full days operations were active	216	258	205	112	216	194
Horsepower rating of power equipment, total	10,452	3,354	3,359	223	2,431	1,085
Per wage earner	13.2	18.3	10.2	13.9	12.2	16.4
Stationary equipment	4,563	1,581	1,609	———	835	538
Mobile equipment	5,889	1,773	1,750	223	1,596	547
Electric energy consumed (thousands of kw.-hrs.), total	3,393	1,744	1,061	———	342	246
Purchased	3,372	1,744	1,061	———	341	226
Generated by reporting companies	21	———	———	———	1	20

[1] For definition of the industry see table 1, footnote 1.
[2] Alabama and Virginia, 1 mine and 1 plant each; California, 2 mines; Colorado, 2 mines and 1 plant; and South Carolina, 1 mine.
[3] Companies with operations in more than 1 State are counted only once in the totals.
[4] Represents crude barite, including washed, jigged, and tabled barite.
[5] Represents value of crude barite mined during the year and value added by preparation processes such as washing, jigging, and tabling.
[6] Includes $54,658 representing the value of mineral pigments, sand and gravel, iron ore, and lead ore produced as secondary products.

TABLE 3.—NUMBER OF WAGE EARNERS IN THE BARITE INDUSTRY IN THE UNITED STATES, BY STATE AND BY MONTH: 1939[1]

STATE	Average for the 12 months	NUMBER RECEIVING PAY DURING PAY-ROLL PERIOD ENDING NEAREST THE 15TH OF THE MONTH											
		January	February	March	April	May	June	July	August	September	October	November	December
United States	792	681	717	734	795	801	818	853	835	832	814	810	819
Georgia	183	147	173	174	188	186	189	204	190	184	185	193	188
Missouri	328	328	325	333	332	331	319	321	321	328	325	328	342
Nevada	16	8	8	8	8	13	23	27	31	27	18	9	9
Tennessee	199	139	147	160	206	203	212	229	218	223	226	217	214
Other States	66	59	64	59	61	68	75	72	75	70	60	63	66

[1] For definition of the industry see table 1, footnote 1.

TABLE 4.—EMPLOYMENT AND WORKING TIME IN THE BARITE INDUSTRY IN THE UNITED STATES, BY DEPARTMENT AND BY STATE: 1939 [1]

DEPARTMENT	United States	Georgia	Missouri	Nevada	Tennessee	Other States
Average number of wage earners on active days, total	835	188	340	26	205	76
At mines, total	511	76	216	26	135	58
Underground	32	----	----	10	----	22
Open-pit	402	60	206	15	89	32
Surface shops and yards	77	16	10	1	46	4
At preparation plants	324	112	124	----	70	18
Average number of equivalent full days operations were active	216	258	205	112	216	194
At mines	224	268	208	112	253	205
Underground	229	----	----	106	----	285
Open-pit	217	262	204	114	264	136
Surface shops and yards	255	290	289	150	233	312
At preparation plants	204	252	200	----	144	182
Number of man-shifts worked by wage earners, total	181,885	48,961	70,800	2,972	44,317	14,835
On active days, total	180,366	48,563	69,789	2,922	44,317	14,775
At mines, total	114,324	20,346	44,988	2,922	34,222	11,866
Underground	7,334	----	----	1,064	----	6,270
Open-pit	87,348	15,700	42,079	1,708	23,513	4,348
Surface shops and yards	19,642	4,646	2,889	150	10,709	1,248
At preparation plants	66,042	28,217	24,821	----	10,095	2,909
On inactive days	1,519	398	1,011	50	----	60
Number of man-hours worked by wage earners, total	1,439,006	401,791	571,424	21,875	325,536	118,380
On active days, total	1,426,624	398,604	563,109	21,475	325,536	117,900
At mines, total	888,894	166,372	361,641	21,475	244,778	94,628
Underground	57,068	----	----	6,908	----	50,160
Open-pit	686,760	127,704	337,301	13,667	173,804	34,484
Surface shops and yards	145,066	38,668	24,340	900	71,174	9,984
At preparation plants	537,730	232,232	201,468	----	80,758	23,272
On inactive days	12,382	3,187	8,315	400	----	480

[1] For definition of the industry see table 1, footnote 1.

TABLE 5.—NUMBER OF MAN-SHIFTS WORKED BY WAGE EARNERS ON ACTIVE DAYS AT MINES AND AT PREPARATION PLANTS IN THE BARITE INDUSTRY IN THE UNITED STATES, BY SHIFT AND BY STATE: 1939 [1]

SHIFT AND DEPARTMENT	UNITED STATES		Georgia	Missouri	Nevada	Tennessee	Other States
	Number	Percent of total					
Number of man-shifts worked by wage earners on active days, total	180,366	100.0	48,563	69,789	2,922	44,317	14,775
During first shift	163,922	90.9	43,191	60,977	2,922	44,199	12,633
During second shift	12,867	7.1	5,072	5,535	----	118	2,142
During third shift	3,577	2.0	300	3,277	----	----	----
At mines, total	114,324	100.0	20,346	44,988	2,922	34,222	11,866
During first shift	106,056	92.8	17,421	41,767	2,922	34,222	9,724
During second shift	6,799	5.9	2,625	2,032	----	----	2,142
During third shift	1,469	1.3	300	1,189	----	----	----
At preparation plants, total	66,042	100.0	28,217	24,821	----	10,095	2,909
During first shift	57,866	87.6	25,770	19,210	----	9,977	2,909
During second shift	6,068	9.2	2,447	3,503	----	118	----
During third shift	2,108	3.2	----	2,108	----	----	----

[1] For definition of the industry see table 1, footnote 1. Figures refer only to man-shifts worked by wage earners on active days; they exclude statistics for inactive days, when only maintenance work was carried on.

TABLE 6.—QUANTITY OF FUEL AND ELECTRIC ENERGY CONSUMED IN THE BARITE INDUSTRY IN THE UNITED STATES, BY STATE AND BY KIND: 1939[1]

STATE	FUEL					ELECTRIC ENERGY (Thousands of kilowatt-hours)		
	Anthracite (tons of 2,000 pounds)	Bituminous coal (tons of 2,000 pounds)	Fuel oils (barrels of 42 gallons)	Gasoline and kerosene (gallons)	Natural gas (thousands of cubic feet)	Total	Purchased	Generated by reporting companies
United States, total	188	2,507	7,645	402,221	7,340	3,393	3,372	21
Georgia	188	379	3,910	113,948	7,340	1,744	1,744	----
Missouri	----	112	2,198	139,548	----	1,061	1,061	----
Nevada	----	----	----	6,580	----	----	----	----
Tennessee	----	1,518	1,324	130,235	----	342	341	1
Other States	----	498	213	11,910	----	246	226	20

[1]For definition of the industry see table 1, footnote 1.

TABLE 7.—NUMBER AND HORSEPOWER RATING OF PRIME MOVERS AND ELECTRIC MOTORS IN THE BARITE INDUSTRY IN THE UNITED STATES, BY TYPE AND BY STATE: 1939[1]

STATE AND TYPE OF EQUIPMENT	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY											ELECTRIC MOTORS DRIVEN BY ENERGY GENERATED BY REPORTING COMPANIES	
	Aggregate horsepower	Prime movers								Electric motors driven by purchased energy			
		Total		Driving generators		Not driving generators		Ordinarily idle (included in preceding columns)					
		Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower
United States, total	10,452	169	8,303	2	138	167	8,165	5	83	120	2,149	8	102
Stationary[2]	4,563	65	2,551	2	138	63	2,413	5	83	114	2,012	8	102
Mobile[3]	5,889	104	5,752	----	----	104	5,752	----	----	6	137	----	----
Georgia, total	3,354	36	2,191	----	----	36	2,191	----	----	67	1,165	----	----
Stationary[2]	1,581	10	418	----	----	10	418	----	----	67	1,165	----	----
Mobile[3]	1,773	26	1,773	----	----	26	1,773	----	----	----	----	----	----
Missouri, total	3,359	70	2,726	----	----	70	2,726	3	41	32	633	----	----
Stationary[2]	1,609	36	1,076	----	----	36	1,076	3	41	29	533	----	----
Mobile[3]	1,750	34	1,650	----	----	34	1,650	----	----	3	100	----	----
Nevada[4]	223	5	223	----	----	5	223	----	----	----	----	----	----
Tennessee, total	2,431	45	2,298	1	18	44	2,280	2	42	9	133	3	2
Stationary[2]	835	14	702	1	18	13	684	2	42	9	133	3	2
Mobile[3]	1,596	31	1,596	----	----	31	1,596	----	----	----	----	----	----
Other States, total	1,085	13	865	1	120	12	745	----	----	12	220	5	100
Stationary[2]	538	5	355	1	120	4	235	----	----	9	183	5	100
Mobile[3]	547	8	510	----	----	8	510	----	----	3	37	----	----

[1]For definition of the industry see table 1, footnote 1.
[2]Horsepower rating of engines, motors, etc. for driving stationary or fixed equipment such as mine hoists, electric generators, washing-plant equipment, etc.
[3]Horsepower rating of engines, motors, etc. for driving mobile equipment such as power shovels, dragline excavators, clamshell loaders, trucks, etc.
[4]Represents mobile equipment; no stationary equipment was reported.

TABLE 8.—NUMBER OF SURFACE POWER-LOADING MACHINES IN THE BARITE INDUSTRY IN THE UNITED STATES, BY TYPE, BY KIND OF POWER USED, BY SIZE, AND BY STATE: 1939[1]

TYPE OF MACHINE, KIND OF POWER USED, AND SIZE	United States	Georgia	Missouri	Nevada	Tennessee	Other States
Power shovels, total[2]	44	14	16	1	10	3
Kind of power used:						
Steam	6	3	----	----	1	2
Electric	2	----	2	----	----	----
Internal-combustion engine	36	11	14	1	9	1
Dragline excavators[3]	5	----	4	----	1	----
Scraper loaders, total	4	----	1	----	3	----
Kind of power used:						
Electric	1	----	1	----	----	----
Internal-combustion engine	3	----	----	----	3	----
Horsepower rating of hoists:						
Less than 10	3	----	----	----	3	----
10 - 25	1	----	1	----	----	----
Clamshells and orange-peel loaders, total	3	1	----	----	2	----
Kind of power used:						
Steam	2	----	----	----	2	----
Internal-combustion engine	1	1	----	----	----	----
Pumps (sand, gravel, or matrix)[4]	4	3	1	----	----	----
Other types[4]	1	1	----	----	----	----

[1]For definition of the industry see table 1, footnote 1. No underground power-loading machines were reported.
[2]All had dipper capacities of less than 3 cubic yards.
[3]All were driven by internal-combustion engines and had bucket capacities of less than 3 cubic yards.
[4]All were driven by electric power.

TABLE 9.—SELECTED STATISTICS FOR INCORPORATED AND FOR UNINCORPORATED OPERATING COMPANIES IN THE BARITE INDUSTRY IN THE UNITED STATES, BY STATE: 1939[1]

STATE AND TYPE OF OWNERSHIP	Number of operating companies[2]	Number of mines	Number of preparation plants	Production of barite (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
						Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
									Total	Performing manual labor		
United States, total	37	47	32	348,022	$2,065,048	870	792	62	16	4	$597,140	$155,219
Incorporated	23	32	20	283,891	1,709,059	628	572	56	-----	-----	458,530	146,869
Unincorporated	14	15	12	64,131	355,989	242	220	6	16	4	138,610	8,350
Georgia, total	7	7	7	95,235	494,387	199	183	12	4	1	129,651	37,930
Incorporated	4	4	4	76,659	434,407	152	141	11	-----	-----	102,651	36,730
Unincorporated	3	3	3	18,576	59,980	47	42	1	4	1	27,000	1,200
Missouri, total	17	23	17	127,408	836,917	365	328	28	9	2	265,262	68,597
Incorporated	9	14	10	98,452	627,707	231	206	25	-----	-----	188,412	64,297
Unincorporated	8	9	7	30,956	209,210	134	122	3	9	2	76,850	4,300
Nevada, total	4	4	-----	16,592	61,298	20	16	3	1	-----	12,775	2,999
Incorporated	3	3	-----	16,592	61,298	20	16	3	1	-----	12,775	2,999
Unincorporated	1	1	-----									
Tennessee, total	5	6	5	56,997	369,997	210	199	9	2	1	120,021	27,196
Incorporated	3	4	3	56,997	369,997	210	199	9	2	1	120,021	27,196
Unincorporated	2	2	2									
Other States[3]	6	7	3	51,790	302,449	76	66	10	-----	-----	69,431	18,497

[1]For definition of the industry see table 1, footnote 1.
[2]Companies with operations in more than 1 State are counted only once in the totals.
[3]Incorporated only; no unicorporated operating companies were reported.

TABLE 10.—SELECTED STATISTICS FOR BARITE OPERATIONS IN THE UNITED STATES, CLASSIFIED BY VALUE OF PRODUCTS AND BY STATE: 1939[1]

STATE AND VALUE OF PRODUCTS	Number of mines	Number of preparation plants	Production of barite (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	47	32	348,022	$2,065,048	870	792	62	16	4	$597,140	$155,219
$1 - $19,999	15	7	22,004	110,735	103	90	6	7	3	45,421	5,662
$20,000 - $49,999	14	12	88,565	494,304	253	231	14	8	1	159,450	22,679
$50,000 - $99,999	4	4	54,512	291,929	131	123	7	1	-----	88,333	24,525
$100,000 - $249,999	3	2	135,825	857,956	185	172	13	-----	-----	204,517	32,492
$250,000 - $499,999	1	1									
Unclassified	10	6	47,116	310,124	198	176	22	-----	-----	99,419	70,061
Georgia, total	7	7	95,235	494,387	199	183	12	4	1	129,651	37,930
$1 - $19,999	1	1	18,576	59,980	47	42	1	4	1	27,000	1,200
$20,000 - $49,999	2	2									
$50,000 - $99,999	3	3	76,659	434,407	152	141	11	-----	-----	102,651	36,730
$100,000 - $249,999	1	1									
Missouri, total	23	17	127,408	836,917	365	328	28	9	2	265,262	68,597
$1 - $19,999	9	5	10,715	72,111	67	58	4	5	2	25,972	3,925
$20,000 - $49,999	7	7	41,454	279,172	140	130	7	3	-----	90,196	12,407
$50,000 - $99,999	1	1	72,315	467,300	133	126	6	1	-----	141,769	13,000
$100,000 - $249,999	1	1									
$250,000 - $499,999	1	1									
Unclassified	4	2	2,924	18,334	25	14	11	-----	-----	7,325	39,265
Nevada, total	4	-----	16,592	61,298	20	16	3	1	-----	12,775	2,999
$1 - $19,999	2	-----	16,592	61,298	20	16	3	1	-----	12,775	2,999
$20,000 - $49,999	2	-----									
Tennessee, total	6	5	56,997	369,997	210	199	9	2	1	120,021	27,196
$20,000 - $49,999	2	2	56,997	369,997	210	199	9	2	1	120,021	27,196
Unclassified	4	3									
Other States, total	7	3	51,790	302,449	76	66	10	-----	-----	69,431	18,497
$1 - $19,999	3	1	9,713	51,079	31	28	3	-----	-----	16,328	4,960
$20,000 - $49,999	1	1									
$100,000 - $249,999	1	-----	42,077	251,370	45	38	7	-----	-----	53,103	12,537
Unclassified	2	1									

[1]For definition of the industry see table 1, footnote 1. Reports classified by value of products represent a single mine or a single mine and a single preparation plant reported together. Statistics shown for "Unclassified" represent reports for more than one mine or preparation plant and reports for central offices reported separately from their associated barite operations.

TABLE 11.—SELECTED STATISTICS FOR BARITE OPERATIONS IN THE UNITED STATES, CLASSIFIED BY QUANTITY OF PRODUCT: 1939[1]

QUANTITY OF PRODUCT (tons of 2,000 pounds)	Number of mines	Number of preparation plants	Production of barite (tons of 2,000 pounds)	Value of products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	47	32	348,022	$2,065,048	870	792	62	16	4	$597,140	$155,219
1 - 499	3	1	850	5,611	13	11	1	1	———	6,573	800
500 - 999	4	1	2,348	15,495	18	16	1	1	1	7,168	937
1,000 - 1,999	5	3	7,058	44,394	34	27	4	3	1	13,754	3,925
2,000 - 4,999	6	4	25,769	128,970	71	66	3	2	1	38,213	5,222
5,000 - 9,999	11	11	73,193	443,372	238	218	11	9	1	153,296	17,657
10,000 - 14,999	2	1	75,492	380,440	160	152	8	———	———	110,869	27,425
15,000 - 19,999	3	3									
20,000 and over	3	2	116,196	736,642	138	126	12	———	———	167,748	29,192
Unclassified	10	6	47,116	310,124	198	176	22	———	———	99,419	70,061

[1]For definition of the industry see table 1, footnote 1. Reports classified by quantity of product represent a single mine or a single mine and a single preparation plant reported together. Statistics shown for "Unclassified" represent reports for more than one mine or preparation plant and reports for central offices reported separately from their associated barite operations.

TABLE 12.—SELECTED STATISTICS FOR BARITE OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF WAGE EARNERS: 1939[1]

NUMBER OF WAGE EARNERS	Number of mines	Number of preparation plants	Production of barite (tons of 2,000 pounds)	Value of products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	47	32	348,022	$2,065,048	870	792	62	16	4	$597,140	$155,219
1 - 5	8	2	19,084	78,957	27	22	5	———	———	21,693	5,269
6 - 20	6	6	29,936	191,270	89	79	9	1	1	55,127	13,522
21 - 50	7	6	144,751	850,053	255	239	16	———	———	201,115	49,517
Unclassified	26	18	154,251	944,788	499	452	32	15	3	319,205	86,911

[1]For definition of the industry see table 1, footnote 1. Reports classified by average number of wage earners employed during the year represent a single mine or a single mine and a single preparation plant reported together. Statistics shown for "Unclassified" represent: Reports for more than one mine or preparation plant; reports on which number of wage earners, by month, was not adequately reported; and reports for central offices reported separately from their associated barite operations.

TABLE 13.—SELECTED STATISTICS FOR BARITE OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK: 1939[1]

HOURS PER WEEK	Number of mines	Number of preparation plants	Production of barite (tons of 2,000 pounds)	Value of products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	47	32	348,022	$2,065,048	870	792	62	16	4	$597,140	$155,219
36 - 39	1	———	55,589	228,749	89	84	5	———	———	63,606	11,224
40	4	3									
41 - 42	4	3	35,186	205,057	128	121	7	———	———	68,151	14,510
43 - 44	11	7	64,264	359,651	172	159	13	———	———	99,149	35,555
45 - 47	2	2	95,170	585,030	129	119	10	———	———	126,093	29,092
48	2	1									
Unclassified	23	16	117,813	686,561	352	309	27	16	4	240,141	64,840

[1]For definition of the industry see table 1, footnote 1. Reports were classified by number of hours in the full-time workweek reported for wage earners in that department of the operation for which the largest number of man-hours worked was reported. Statistics shown for "Unclassified" represent reports on which number of hours was not reported and reports for central offices reported separately from their associated barite operations.

TABLE 14.—SELECTED STATISTICS FOR BARITE OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF DAYS ACTIVE DURING THE YEAR: 1939[1]

NUMBER OF DAYS ACTIVE DURING THE YEAR	Number of mines	Number of preparation plants	Production of barite (tons of 2,000 pounds)	Value of products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	47	32	348,022	$2,065,048	870	792	62	16	4	$597,140	$155,219
50 - 99	2	———	14,574	87,598	46	40	6	———	———	26,385	6,854
100 - 149	4	2									
150 - 199	3	2	42,028	240,673	93	88	5	———	———	67,502	11,162
200 - 224	2	2									
250 - 274	3	3	90,201	553,513	115	103	11	1	1	110,879	24,897
275 - 299	2	1									
300 - 324	3	3	45,479	229,693	109	103	6	———	———	68,333	23,125
Unclassified	28	19	155,740	953,571	507	458	34	15	3	324,041	89,181

[1]For definition of the industry see table 1, footnote 1. Reports classified by number of days active represent a single mine or a single mine and a single preparation plant reported together; such reports were classified by number of days the mine was in operation for production or development purposes during the year. Statistics shown for "Unclassified" represent: Reports for more than one mine or preparation plant; reports on which number of days active was not reported; and reports for central offices reported separately from their associated barite operations.

DIATOMITE

The diatomite industry in the United States produced 98,461 short tons of diatomite in 1939. The product, virtually all of which was milled or otherwise prepared by the industry in 1939, was valued at $2,018,000.

Diatomite operations employed an average of 299 wage earners to whom $338,000 was paid in wages. Salaried employees, of whom there were 62 in October, were paid a total of $138,000 during the year. Supplies and materials cost $446,000; fuels, $96,000; and purchased electric energy, $83,000. These expenses aggregated $1,101,000. Over $82,000 was spent for buildings, machinery, and equipment erected or installed during the year.

Diatomite (or diatomaceous earth) is a hydrous form of silica of organic origin, consisting of the siliceous fossil remains of microscopic aquatic plants, known as diatoms. Diatomite deposits frequently contain varying quantities of inorganic impurities such as sand, clay, volcanic ash, etc. Pure varieties of diatomite are characterized by porosity, chalklike appearance, chemical inertness, friability, and light weight.

Diatomite has a large variety of uses, of which the most important are for filtration, insulation, fillers, and admixtures. Its value as a filtering material and as an insulating material for heat, sound, and electricity is due largely to its extreme porosity; it is used as a filler largely because of its chemical inertness and light weight. Diatomite is also used as a detergent or mild abrasive in soaps, dentifrices, and metal polishes; as a carrying agent for catalysts; and for many other purposes. Most diatomite is consumed in pulverized form, although some is sawed into blocks.

The greater part of the diatomite produced in 1939 was quarried in California. Active diatomite mines were also located in Florida, Maryland, Massachusetts, Nevada, New York, Oregon, and Washington. Altogether there were 14 producing mines and 12 associated preparation plants operated by 14 companies. Eleven of the mines were open-quarry operations, two used a combination of open-quarry and underground mining methods, and one used only underground mining methods. The mines and mills were active, on the average, the equivalent of 281 full days during the year. The average workshift was 8 hours long, and most operations worked one shift per day. The largest mill, however, operated three shifts per day.

Wage earners employed at diatomite mines and mills worked 751,000 man-hours in 1939 and received an average of 45 cents per man-hour. The average output of diatomite, most of which was in milled form, averaged 0.1 ton per man-hour, and the average value per ton was $20.49. The number of wage earners fluctuated between 232 in February and 362 in November.

Power equipment in use or available for use at the end of the year had an aggregate rated capacity of 6,648 horsepower, or about 22 per wage earner. Approximately 72 percent of the total horsepower was used for driving stationary or fixed equipment such as hoists and crushing and grinding equipment; the remaining 28 percent was used for driving mobile equipment such as power shovels and trucks. The industry purchased 9,998,000 kilowatt-hours of electric energy in 1939.

For distribution of diatomite operations by value of products, number of wage earners, number of days active, number of hours per wage earner in the full-time workweek, and by type of ownership, see General Summary tables 8, 15, 17, 18, and 26, respectively.

TABLE 1.—PRINCIPAL STATISTICS FOR THE DIATOMITE INDUSTRY IN THE UNITED STATES: 1939, 1909, 1889, AND 1880[1]

(For producing operations only)

ITEM	1939	1909	1889	1880
Number of operating companies[2]	14	14	[3]	[3]
Number of mines	14	16	[3]	2
Production of diatomite (tons of 2,000 pounds)	98,461	[3]	3,466	1,833
Value of products, total	$2,017,724	$75,503	[4]$23,372	[4]$45,660
Diatomite	$2,017,724	[3]	$23,372	$45,660
Other products and services rendered	----------	[3]	[3]	[3]
Number of persons engaged, total	370	83	[4]52	[4]13
Wage earners (average for the year, including inactive periods)	299	59	[5]49	13
Salaried employees	62	8	[6]3	
Proprietors and firm members	9	16	[3]	[3]
Performing manual labor	4	1	[3]	[3]
Principal expenses designated below, total	$1,100,794	$48,834	[4]$9,723	[4]$3,381
Wages	$337,729	$27,627	$7,598	$1,381
Salaries	$138,079	$5,110	[6]$790	
Supplies and materials	$445,617	$4,432		
Fuel	$96,001	[7]$9,235	[7]$760	[7]$2,000
Purchased electric energy	$83,368			
Contract work	----------	$2,430	$575	[3]
Cost of buildings, machinery, and equipment erected or installed during year	$82,459	[3]	[3]	[3]
Buildings	$34,449	[3]	[3]	[3]
Machinery and equipment, total	$48,010	[3]	[3]	[3]
Purchased in new condition	$46,689	[3]	[3]	[3]
Purchased in used condition	$1,321	[3]	[3]	[3]
Horsepower rating of power equipment, total	6,648	316	[3]	[3]
Per wage earner	22.2	5.4	[3]	[3]
Prime movers	1,757	316	[3]	[3]
Electric motors driven by purchased energy	4,891	----------	[3]	[3]
Horsepower rating of electric motors driven by energy generated by reporting companies	----------	----------	[3]	[3]
Fuels consumed:				
Anthracite (tons of 2,000 pounds)	----------	[3]	[3]	[3]
Bituminous coal (tons of 2,000 pounds)	55	[3]	[3]	[3]
Fuel oils (barrels of 42 gallons)	9,267	[3]	[3]	[3]
Gasoline and kerosene (gallons)	86,184	[3]	[3]	[3]
Natural gas (thousands of cubic feet)	359,952	[3]	[3]	[3]
Electric energy consumed (thousands of kw.-hrs.), total	9,998	[3]	[3]	[3]
Purchased	9,998	[3]	[3]	[3]
Generated by reporting companies	----------	[3]	[3]	[3]

[1] The industry represents mines and associated preparation plants engaged primarily in the mining and milling of diatomite (infusorial earth). Figures for 1939 cover only those producing operations (mines or mines and mills operated together) whose reported value of products, designated principal expenses, or cost of buildings, machinery, and equipment erected or installed during the year amounted to at least $2,500. No minimum was placed on the size of operations included for 1909, 1889, and 1880. In 1939, 866 short tons of diatomite valued at $5,813 were produced by seven operations that were too small to come within the scope of the census canvass. In 1939, mines were located as follows: California, 3 mines; Florida, 1; Maryland, 1; Massachusetts, 1; Nevada, 2; New York, 1; Oregon, 2; and Washington, 3. In 1939, mills were located as follows: California, 3 mills; Florida, 1; Maryland, 1; Nevada, 1; New Hampshire, 1; Oregon, 2; and Washington, 3. No nonproducing operations were reported for 1939.

[2] For 1939 and 1909, companies that submitted more than one report are counted only once in the totals.

[3] Not available.

[4] Excludes statistics for items for which information was not available as indicated by footnotes.

[5] The 1889 census schedule called for "average number employed," presumably an average for active periods; and requested that figures for wage earners include those employed by contractors and subcontractors.

[6] Represents statistics for foremen only.

[7] For 1909, statistics include amounts paid for purchased power other than electric. Statistics for cost of purchased power for 1889 and 1880 were not explicitly requested but probably are included in part in the figures reported for supplies and materials.

TABLE 2.—NUMBER OF WAGE EARNERS IN THE DIATOMITE INDUSTRY IN THE UNITED STATES, BY MONTH: 1939[1]

MONTH	Number	MONTH	Number	MONTH	Number
Average	299	April	284	September	295
		May	302	October	354
January	248	June	309	November	362
February	232	July	302	December	340
March	243	August	309		

[1]For definition of the industry see table 1, footnote 1.

TABLE 3.—EMPLOYMENT AND WORKING TIME IN THE DIATOMITE INDUSTRY IN THE UNITED STATES, BY DEPARTMENT: 1939[1]

DEPARTMENT	Number	DEPARTMENT	Number
Average number of wage earners on active days, total	382	Number of man-shifts worked by wage earners, total[2]	93,902
		On active days, total	93,129
At mines, total	99	At mines, total	23,213
Underground	3	Underground	326
Open-pit	84	Open-pit	18,764
Surface shops and yards	12	Surface shops and yards	4,123
At mills	283	At mills	69,916
		On inactive days	773
Average number of equivalent full days operations were active	281	Number of man-hours worked by wage earners, total	750,993
		On active days, total	744,805
At mines	284	At mines, total	185,481
		Underground	2,612
Underground	109	Open-pit	149,887
Open-pit	223	Surface shops and yards	32,982
Surface shops and yards	344	At mills	559,324
At mills	300	On inactive days	6,188

[1]For definition of the industry see table 1, footnote 1.
[2]The total number of man-shifts included 12,459 worked during the second shift and 8,899 during the third shift.

TABLE 4.—NUMBER OF SURFACE POWER-LOADING MACHINES IN THE DIATOMITE INDUSTRY IN THE UNITED STATES, BY TYPE, BY KIND OF POWER USED, AND BY SIZE: 1939[1]

TYPE, KIND OF POWER USED, AND SIZE	Number	TYPE, KIND OF POWER USED, AND SIZE	Number
Power shovels, total	7	Dragline excavators, total	5
Kind of power used:		Kind of power used:	
Steam	2	Electric	4
Electric	2	Internal-combustion engine	1
Internal-combustion engine	3	Bucket capacity (cu. yds.):	
Dipper capacity (cu. yds.):		Less than 3	4
Less than 3	6	3 to 5	1
3 to 5	1	Clamshell or orange-peel loaders[2]	1

[1]For definition of the industry see table 1, footnote 1. No underground loading machines were reported.
[2]Driven by internal-combustion engine.

FELDSPAR

The feldspar industry in the United States produced 214,000 long tons of crude feldspar in 1939.[1] The total value of products of the industry was over $981,000, of which about $48,000 represented the value of beryl, flint, fluorspar, lithium minerals, quartz, mica, and tantalite obtained as secondary products.

Most of the feldspar produced is ground before use and is consumed principally in the manufacture of glass, pottery, and enamel. Other uses include the manufacture of soaps, abrasives, and dental porcelain.

The 59 mines comprising the industry in 1939 were located in Arizona, California, Colorado, Connecticut, Maine, New Hampshire, New York, North Carolina, South Dakota, Virginia, and Wyoming. About 96 percent of the tonnage was produced at 56 open-cut mines; the remaining 4 percent, at 3 underground mines.

PRINCIPAL EXPENSES

The feldspar industry paid $383,000 in wages to an average of 512 wage earners during the year. Salaried employees were paid about $113,000. Supplies and materials consumed during the year cost $81,000; fuel, $28,000; purchased electric energy, $8,000; and work done on contract by other concerns, about $5,000. These reported principal expenses totaled $618,000. Buildings, machinery, and equipment costing $46,000 were erected or installed during the year.

[1] These figures do not include statistics for operations for which neither the value of products, nor reported principal expenses, nor cost of buildings, machinery, and equipment amounted to as much as $2,500 during the year. Figures for the feldspar industry summarized in this report exclude statistics for such "small" operations, located in California, Colorado, Connecticut, Maine, Maryland, New Hampshire, New York, North Carolina, Pennsylvania, South Dakota, and Virginia. "Small" feldspar operations reported the production of 58,233 long tons of feldspar valued at $233,311. Figures for the feldspar industry also exclude statistics for the production of 2,335 long tons of feldspar valued at $9,612 produced as secondary products at mica and lithium-minerals operations.

EMPLOYMENT AND WORKING TIME

The number of wage earners employed by the industry, which averaged 512 for the year, varied from a low of 422 in January to a peak of 587 in October. In addition, 54 salaried employees and 39 proprietors or firm members were reported for October. Employment was greatest in North Carolina where the average number of wage earners employed was 192.

For the industry as a whole, wage earners worked a total of 1,016,000 man-hours and earned an average of 38 cents per man-hour. Operations were active the equivalent of 225 full days during the year. They reported working only one shift per day, the length of shift averaging 8.2 hours. An average of 0.21 long ton of crude feldspar was produced per man-hour worked by wage earners.

POWER EQUIPMENT

Power equipment in use or available for use at the end of 1939 had an aggregate rating of 5,668 horsepower--an average of about 11 horsepower per wage earner. Of the total, 5,037 horsepower represented the rating of prime movers such as gasoline, Diesel, and steam engines and 631 horsepower represented the rating of electric motors driven by purchased energy. About 64 percent of the total horsepower was for driving mobile equipment such as power shovels, tractors, and trucks; the remaining 36 percent was for driving stationary or fixed equipment such as mine hoists and pumps. The industry consumed 353,000 kilowatt-hours of electricity in 1939, all of which was purchased. The total consumption of gasoline and kerosene was 163,232 gallons; fuel oils, 69 barrels; and coal, 378 short tons.

At the end of the year operations in the industry were equipped with three scraper loaders—one driven by compressed air and two by internal-combustion engines; eight derricks or cranes—six driven by internal-combustion engines, one by steam, and one by electric power; one power shovel driven by steam; and one tractor scraper driven by an internal-combustion engine.

TABLE 1.—PRINCIPAL STATISTICS FOR THE FELDSPAR INDUSTRY IN THE UNITED STATES: 1939, 1929, 1919, 1909, AND 1902[1]

(For producing operations only)

ITEM	1939	1929	1919	1909	1902
Number of operating companies[2]	47	(3)	(3)	22	26
Number of mines	59	58	32	28	27
Production of feldspar (tons of 2,240 pounds)[4]	214,009	204,865	(3)	(3)	40,435
Value of all products, total	$981,162	$1,935,335	$584,296	$271,437	[5]$250,424
Feldspar produced	$933,137	$1,917,085	$575,508	(3)	$250,424
Other products and services rendered	$48,025	$18,250	$8,788	(3)	(3)
Number of persons engaged, total	605	703	398	285	[5]279
Wage earners (average for the year, including inactive periods)	512	598	349	247	[6]252
Salaried employees	54	95	29	27	27
Proprietors and firm members	39	10	20	11	(3)
Performing manual labor	21	(3)	6	7	(3)
Principal expenses designated below, total	$618,153	$1,066,363	$460,533	$200,781	$177,817
Wages	$383,032	$526,896	$263,760	$106,653	$107,444
Salaries	$112,502	$202,623	$53,424	$25,703	$20,095
Supplies and materials	$81,482	$239,297	$97,834	$40,852	[7]$50,278
Fuel	$28,465	$21,398	$21,284	[7]$15,892	
Purchased electric energy	$8,031	$61,909	[7]$12,158		
Contract work	$4,641	$14,240	$12,073	$8,681	----------
Cost of machinery and equipment erected or installed during year	$39,311	$28,100	(3)	(3)	(3)
Horsepower rating of prime movers and electric motors driven by purchased energy, total	5,668	6,543	1,782	993	1,204
Per wage earner	11.1	10.9	5.1	4.0	4.8
Prime movers	5,037	2,531	1,227	933	1,204
Electric motors driven by purchased energy	631	4,012	555	60	----------
Horsepower rating of electric motors driven by energy generated by reporting companies	----------	381	----------	20	----------
Fuels consumed:					
Anthracite (tons of 2,000 pounds)	----------	58	----------	(3)	(3)
Bituminous coal (tons of 2,000 pounds)	378	783	3,124	(3)	(3)
Fuel oils (barrels of 42 gallons)	69	1,705	37	(3)	(3)
Gasoline and kerosene (gallons)	163,232	60,246	5,628	(3)	(3)
Natural gas (thousands of cubic feet)	----------	----------	----------	(3)	(3)
Electric energy consumed (thousands of kw.-hrs.), total	353	3,887	(3)	(3)	(3)
Purchased	353	3,827	(3)	(3)	(3)
Generated by reporting companies	----------	60	(3)	(3)	(3)

[1]The feldspar industry includes mines engaged in producing crude feldspar as their principal mineral product. Statistics for feldspar-grinding activities are excluded for 1939 but are included for 1929 and earlier years in instances where such grinding was carried on at the mine location. Figures for 1939 cover only those producing operations (mines, or mines and plants operated together) for which the value of products, reported principal expenses, or cost of buildings, machinery, and equipment erected or installed during the year amounted to at least $2,500. For 1939, figures are thus excluded for smaller feldspar operations (in California, Colorado, Connecticut, Maine, Maryland, New Hampshire, New York, North Carolina, Pennsylvania, South Dakota, and Virginia) that reported the production of 58,233 long tons of feldspar valued at $233,311. In addition, 2,335 long tons of feldspar valued at $9,612, statistics for which are also excluded, were produced in 1939 as secondary products in the mica and lithium-minerals industries. Figures for 1929 cover only "enterprises" for which the value of products or cost of development work amounted to at least $2,500; the corresponding minimum for 1919 was $500 for value of products and $5,000 for cost of development work. No minimum was placed on the size of operations included for 1909 and 1902. Statistics for operations without products are excluded for all years; only 1 such feldspar operation at which the reported principal expenses or cost of buildings, machinery, and equipment during the year amounted to $2,500 or more was reported for 1939. No detailed statistics are available for census years prior to 1902; however, in 1889 production was reported as 6,970 long tons valued at $39,370 while in 1880 the production of quartz and feldspar amounted to 19,260 long tons valued at $103,878.

[2]For 1939 and 1909, companies that submitted more than one report are counted only once in the totals.

[3]Not available.

[4]Figure for 1939 represents crude feldspar mined.

[5]Excludes statistics for items for which information was not available as indicated by footnotes.

[6]On schedules for the 1902 census, concerns were instructed that "The average number employed during the year is the number that would be required, at continuous employment for the twelve months, to produce the quantity of products reported." "In editing the schedules...the figures for the average number of employees were reduced to a 300-day basis whenever the schedules showed them to be the average number for a shorter period; when it was evident that the employees had worked more than 300 days, the average number for the longer period was allowed to stand."

[7]For 1919 and 1909, statistics include amounts paid for purchased power other than electric. Statistics for cost of purchased power for 1902 were not explicitly requested but probably are included in part in the figures reported for supplies and materials.

TABLE 2.—PRINCIPAL STATISTICS FOR THE FELDSPAR INDUSTRY IN THE UNITED STATES, BY STATE: 1939[1]

(For producing operations only)

ITEM	United States	Colorado	Maine	New Hampshire	North Carolina	South Dakota	Virginia[2]	Other States[3]
Number of operating companies[4]	47	4	8	4	13	11	4	6
Number of mines	59	7	8	5	17	11	4	7
Number of preparation plants	2	---	---	---	1	---	---	1
Number of persons engaged, total	[5]605	42	35	81	217	58	106	64
Wage earners (average for the year)	512	32	23	68	192	43	98	56
Salaried employees	[5]54	8	3	12	14	4	3	8
Proprietors and firm members	39	2	9	1	11	11	5	---
Performing manual labor	21	1	4	---	5	9	2	---
Production of feldspar:								
Tons of 2,240 pounds[6]	214,009	24,985	8,542	33,563	48,958	32,806	39,502	25,653
Value at mines or plants[7]	$933,137	$91,985	$38,735	$157,497	$259,309	$91,722	$158,294	$135,595
Value of all products	[8]$981,162	$93,260	$39,719	$159,029	$291,811	$95,057	$158,294	$143,992
Principal expenses designated below, total	[5]$618,153	$64,781	$26,700	$129,225	$160,908	$61,057	$85,646	$86,736
Wages	$383,032	$35,814	$15,544	$63,667	$97,525	$41,403	$67,266	$61,813
Salaries	[5]$112,502	$18,640	$6,358	$46,944	$12,003	$8,460	$6,000	$10,997
Supplies and materials	$81,482	$5,809	$2,674	$13,087	$39,908	$6,741	$4,850	$8,413
Fuel	$28,465	$4,518	$2,124	$2,897	$4,067	$2,724	$7,530	$4,605
Purchased electric energy	$8,031	---	---	$2,630	$3,560	$933	---	$908
Contract work	$4,641	---	---	---	$3,845	$796	---	---
Cost of buildings, machinery, and equipment erected or installed during year	$45,849	$475	$221	$5,652	$1,700	$2,483	$35,000	$318
Buildings	$6,538	$300	---	---	---	$1,238	$5,000	---
Machinery and equipment, total	$39,311	$175	$221	$5,652	$1,700	$1,245	$30,000	$318
Purchased in new condition	$36,818	$175	$221	$5,652	$600	---	$30,000	$170
Purchased in used condition	$2,493	---	---	---	$1,100	$1,245	---	$148
Total number of man-shifts worked by wage earners	123,514	8,516	4,773	17,095	43,926	11,823	22,432	14,949
Total number of man-hours worked by wage earners	1,016,164	67,453	38,865	138,947	352,890	93,875	198,512	125,622
Average number of hours worked per shift	8.2	7.9	8.1	8.1	8.0	7.9	8.8	8.4
Average hourly earning of wage earners	$0.38	$0.53	$0.40	$0.46	$0.28	$0.44	$0.34	$0.49
Tons of feldspar produced per man-hour	0.211	0.370	0.220	0.242	0.139	0.349	0.199	0.204
Average number of equivalent full days operations were active	225	208	184	204	227	257	239	230
Horsepower rating of power equipment, total	5,668	1,016	443	511	1,574	503	620	1,001
Per wage earner	11.1	31.8	19.3	7.5	8.2	11.7	6.3	17.9
Stationary equipment	2,043	170	172	334	500	313	255	299
Mobile equipment	3,625	846	271	177	1,074	190	365	702
Electric energy consumed (thousands of kw.-hrs.)[9]	353	---	---	136	146	50	---	21

[1] For definition of the industry see table 1, footnote 1.
[2] Figures include statistics for the production of aplite.
[3] Arizona, 1 mine; California, 1 mine and 1 plant; Connecticut, 2 mines; New York, 2 mines; and Wyoming, 1 mine.
[4] Companies with operations in more than 1 State are counted only once in the totals.
[5] Includes statistics for central-office employees in Tennessee.
[6] Represents crude feldspar mined.
[7] Value of crude feldspar mined during the year.
[8] Includes $48,025 representing the value of beryl, flint, fluorspar, lithium minerals, quartz, sheet and scrap mica, and tantalum ore produced as secondary products.
[9] Represents purchased electric energy. No electric energy was reported generated by the reporting companies.

TABLE 3.—NUMBER OF WAGE EARNERS IN THE FELDSPAR INDUSTRY IN THE UNITED STATES, BY STATE AND BY MONTH: 1939[1]

(For producing operations only)

STATE	Average for the 12 months	NUMBER RECEIVING PAY DURING PAY-ROLL PERIOD ENDING NEAREST THE 15TH OF THE MONTH											
		January	February	March	April	May	June	July	August	September	October	November	December
United States, total	512	422	435	465	459	500	515	520	545	556	587	572	572
Colorado	32	25	32	32	36	36	35	32	32	30	37	30	30
Maine	23	18	18	18	18	18	26	32	24	27	26	26	24
New Hampshire	68	54	56	69	44	66	69	68	91	77	75	75	71
North Carolina	192	191	190	192	186	189	175	186	191	189	203	206	204
South Dakota	43	39	41	40	39	41	43	42	47	51	46	48	42
Virginia	98	53	55	58	76	89	102	102	107	126	140	130	140
Other States	56	42	43	56	60	61	65	58	53	56	60	57	61

[1] For definition of the industry see table 1, footnote 1.

TABLE 4.—EMPLOYMENT AND WORKING TIME IN THE FELDSPAR INDUSTRY IN THE UNITED STATES, BY DEPARTMENT AND BY STATE: 1939[1]

(For producing operations only)

DEPARTMENT	United States	Colorado	Maine	New Hampshire	North Carolina	South Dakota	Virginia	Other States
Average number of wage earners on active days, total	541	41	26	84	186	46	94	64
At mines, total	534	41	26	84	185	46	94	58
Underground	34	———	———	———	27	2	———	5
Open-pit	480	41	26	77	146	44	94	52
Surface shops and yards	20	———	———	7	12	———	———	1
At preparation plants	7	———	———	———	1	———	———	6
Average number of equivalent full days operations were active	225	208	184	204	227	257	239	230
At mines	226	208	184	204	227	257	239	247
Underground	247	———	———	———	265	240	———	155
Open-pit	225	208	184	201	218	258	239	260
Surface shops and yards	230	———	———	230	247	———	———	25
At preparation plants	92	———	———	———	248	———	———	66
Number of man-shifts worked by wage earners, total	123,514	8,516	4,773	17,095	43,926	11,823	22,432	14,949
On active days, total	121,564	8,516	4,773	17,095	42,186	11,823	22,432	14,739
At mines, total	120,920	8,516	4,773	17,095	41,938	11,823	22,432	14,343
Underground	8,399	———	———	———	7,142	480	———	777
Open-pit	107,922	8,516	4,773	15,485	31,832	11,343	22,432	13,541
Surface shops and yards	4,599	———	———	1,610	2,964	———	———	25
At preparation plants	644	———	———	———	248	———	———	396
On inactive days	1,950	———	———	———	1,740	———	———	210
Number of man-hours worked by wage earners, total	1,016,164	67,453	38,865	138,947	352,890	93,875	198,512	125,622
On active days, total	1,000,354	67,453	38,865	138,947	338,970	93,875	198,512	123,732
At mines, total	995,202	67,453	38,865	138,947	336,986	93,875	198,512	120,564
Underground	67,192	———	———	———	57,136	3,840	———	6,216
Open-pit	890,413	67,453	38,865	125,262	256,138	90,035	198,512	114,148
Surface shops and yards	37,597	———	———	13,685	23,712	———	———	200
At preparation plants	5,152	———	———	———	1,984	———	———	3,168
On inactive days	15,810	———	———	———	13,920	———	———	1,890

[1] For definition of the industry see table 1, footnote 1.

TABLE 5.—QUANTITY OF FUEL AND ELECTRIC ENERGY CONSUMED IN THE FELDSPAR INDUSTRY IN THE UNITED STATES, BY STATE AND BY KIND: 1939[1]

(For producing operations only)

STATE	FUEL[2]			Electric energy[3] (thousands of kilowatt-hours)
	Bituminous coal (tons of 2,000 pounds)	Fuel oils (barrels of 42 gallons)	Gasoline and kerosene (gallons)	
United States, total	378	69	163,232	353
Colorado	6	40	24,138	———
Maine	———	———	12,859	———
New Hampshire	1	———	18,835	136
North Carolina	21	———	22,178	146
South Dakota	———	———	14,154	50
Virginia	350	———	40,400	———
Other States	———	29	30,868	21

[1] For definition of the industry see table 1, footnote 1.
[2] No anthracite or natural gas was reported consumed.
[3] Represents purchased energy; no electric energy was reported generated and consumed by reporting companies.

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TABLE 6.—NUMBER AND HORSEPOWER RATING OF PRIME MOVERS AND ELECTRIC MOTORS IN THE FELDSPAR INDUSTRY IN THE UNITED STATES, BY TYPE AND BY STATE: 1939[1]

(For producing operations only)

STATE AND TYPE OF EQUIPMENT	Aggregate horsepower	PRIME MOVERS[2]				ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY	
		Total		Ordinarily idle (included in preceding columns)		Number	Horsepower
		Number	Horsepower	Number	Horsepower		
United States, total	5,668	127	5,037	1	120	19	631
Stationary[3]	2,043	53	1,472	----	----	15	571
Mobile[4]	3,625	74	3,565	1	120	4	60
Colorado	1,016	19	1,016	----	----	----	----
Stationary[3]	170	6	170	----	----	----	----
Mobile[4]	846	13	846	----	----	----	----
Maine	443	17	443	1	120	----	----
Stationary[3]	172	8	172	----	----	----	----
Mobile[4]	271	9	271	1	120	----	----
New Hampshire	511	9	277	----	----	6	234
Stationary[3]	334	4	100	----	----	6	234
Mobile[4]	177	5	177	----	----	----	----
North Carolina	1,574	29	1,329	----	----	9	245
Stationary[3]	500	11	315	----	----	5	185
Mobile[4]	1,074	18	1,014	----	----	4	60
South Dakota	503	17	451	----	----	2	52
Stationary[3]	313	9	261	----	----	2	52
Mobile[4]	190	8	190	----	----	----	----
Virginia	620	12	620	----	----	----	----
Stationary[3]	255	7	255	----	----	----	----
Mobile[4]	365	5	365	----	----	----	----
Other States	1,001	24	901	----	----	2	100
Stationary[3]	299	8	199	----	----	2	100
Mobile[4]	702	16	702	----	----	----	----

[1] For definition of the industry see table 1, footnote 1. No electric motors were reported driven by energy generated by reporting companies.
[2] Represents prime movers not driving generators; no prime movers driving generators were reported.
[3] Horsepower rating of engines, motors, etc. for driving stationary or fixed equipment such as mine hoists, pumps, etc.
[4] Horsepower rating of engines, motors, etc. for driving mobile equipment such as power shovels, tractors, trucks, etc.

TABLE 7.—SELECTED STATISTICS FOR INCORPORATED AND FOR UNINCORPORATED OPERATING COMPANIES IN THE FELDSPAR INDUSTRY IN THE UNITED STATES, BY STATE: 1939[1]

(For producing operations only)

STATE AND TYPE OF OWNERSHIP	Number of operating companies[2]	Number of mines	Number of preparation plants	Production of feldspar (tons of 2,240 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
						Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
									Total	Performing manual labor		
United States, total	47	59	2	214,009	$981,162	[3]605	512	[3]54	39	21	$383,032	[3]$112,502
Incorporated	18	29	2	151,480	682,223	[3]382	335	[3]47	-----	-----	276,951	[3]106,427
Unincorporated	29	30	-----	62,529	298,939	223	177	7	39	21	106,081	6,075
Colorado, total	4	7	-----	24,985	93,260	42	32	8	2	1	35,814	18,640
Incorporated	2	5	-----	24,985	93,260	42	32	8	2	1	35,814	18,640
Unincorporated	2	2	-----									
Maine, total	8	8	-----	8,542	39,719	35	23	3	9	4	15,544	6,358
Incorporated	1	1	-----	8,542	39,719	35	23	3	9	4	15,544	6,358
Unincorporated	7	7	-----									
New Hampshire, total	4	5	-----	33,563	159,029	81	68	12	1	-----	63,667	46,944
Incorporated	3	4	-----	33,563	159,029	81	68	12	1	-----	63,667	46,944
Unincorporated	1	1	-----									
North Carolina, total	13	17	1	48,958	291,811	217	192	14	11	5	97,525	12,003
Incorporated	6	9	1	31,083	197,462	131	121	10	-----	-----	65,041	10,303
Unincorporated	7	8	-----	17,875	94,349	86	71	4	11	5	32,484	1,700
South Dakota, total	11	11	-----	32,806	95,057	58	43	4	11	9	41,403	8,460
Incorporated	3	3	-----	23,021	64,468	34	31	3	-----	-----	33,822	6,360
Unincorporated	8	8	-----	9,785	30,589	24	12	1	11	9	7,581	2,100
Virginia, total	4	4	-----	39,502	158,294	106	98	3	5	2	67,266	6,000
Incorporated	1	1	-----	39,502	158,294	106	98	3	5	2	67,266	6,000
Unincorporated	3	3	-----									
Other States, total	6	7	1	25,653	143,992	64	56	8	-----	-----	61,813	10,997
Incorporated	5	6	1	25,653	143,992	64	56	8	-----	-----	61,813	10,997
Unincorporated	1	1	-----									

[1] For definition of the industry see table 1, footnote 1.
[2] Companies with operations in more than 1 State are counted only once in the totals.
[3] Includes statistics for central-office employees in Tennessee.

TABLE 8.—SELECTED STATISTICS FOR FELDSPAR OPERATIONS IN THE UNITED STATES, CLASSIFIED BY VALUE OF PRODUCTS: 1939[1]

(For producing operations only)

VALUE OF PRODUCTS	Number of mines	Number of preparation plants	Production of feldspar (tons of 2,240 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	59	2	214,009	$981,162	605	512	54	39	21	$383,032	$112,502
$1 - $19,999	43	2	82,671	370,475	267	213	20	34	19	155,824	23,442
$20,000 - $49,999	12	-----	75,899	378,260	186	178	5	3	1	127,376	8,376
$50,000 - $99,999	4	-----	55,439	232,427	128	121	5	2	1	99,832	10,160
Unclassified	-----	-----	-----	-----	24	-----	24	-----	-----	-----	70,524

[1] For definition of the industry see table 1, footnote 1. Reports classified by value of products represent a single mine or a single mine and a single preparation plant reported together. Statistics shown for "Unclassified" represent reports for central offices reported separately from their associated feldspar operations.

TABLE 9.—SELECTED STATISTICS FOR FELDSPAR OPERATIONS IN THE UNITED STATES, CLASSIFIED BY QUANTITY OF PRODUCT: 1939[1]

(For producing operations only)

QUANTITY OF PRODUCT (tons of 2,240 pounds)	Number of mines	Number of preparation plants	Production of feldspar (tons of 2,240 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	59	2	214,009	$981,162	605	512	54	39	21	$383,032	$112,502
1 - 999	7	-----	5,754	25,770	25	16	-----	9	7	10,624	-----
1,000 - 1,999	15	1	20,190	99,108	82	59	6	17	9	39,776	4,100
2,000 - 3,499	9	-----	26,008	90,539	51	42	6	3	1	34,494	11,033
3,500 - 4,999	5	-----	22,201	109,035	60	58	-----	2	-----	35,950	-----
5,000 - 9,999	9	-----	56,697	298,412	138	131	4	3	1	105,754	6,200
10,000 and over	4	-----	60,991	214,200	124	117	5	2	1	97,931	9,980
Unclassified	10	1	22,168	144,098	125	89	33	3	2	58,493	81,189

[1] For definition of the industry see table 1, footnote 1. Reports classified by quantity of product represent a single mine or a single mine and a single preparation plant reported together. Statistics shown for "Unclassified" represent reports on which the value of feldspar represented less than 80 percent of the total value of products and reports for central offices reported separately from their associated feldspar operations.

TABLE 10.—SELECTED STATISTICS FOR FELDSPAR OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF WAGE EARNERS: 1939[1]

(For producing operations only)

NUMBER OF WAGE EARNERS	Number of mines	Number of preparation plants	Production of feldspar (tons of 2,240 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	59	2	214,009	$981,162	605	512	54	39	21	$385,032	$112,502
None	1	----	39,175	156,521	88	60	9	19	16	49,537	12,358
1 - 5	20	----									
6 - 20	19	2	79,029	380,951	208	194	12	3	----	155,636	14,604
21 - 50	6	----	66,630	301,323	176	167	7	2	1	122,059	14,316
Unclassified	13	----	29,177	142,367	132	91	26	15	4	56,020	71,224

[1] For definition of the industry see table 1, footnote 1. Reports classified by average number of wage earners employed during the year represent a single mine or a single mine and a single preparation plant reported together. Statistics shown for "Unclassified" represent reports on which number of wage earners, by month, was not adequately reported and reports for central offices reported separately from their associated feldspar operations.

TABLE 11.—SELECTED STATISTICS FOR FELDSPAR OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK: 1939[1]

(For producing operations only)

HOURS PER WEEK	Number of mines	Number of preparation plants	Production of feldspar (tons of 2,240 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	59	2	214,009	$981,162	605	512	54	39	21	$385,032	$112,502
40	12	1	56,916	228,179	159	142	10	7	4	109,138	17,142
41 - 42	19	1	91,014	454,161	211	199	9	3	3	158,811	13,171
43 - 44	3	----	15,158	54,400	35	26	8	1	1	27,015	10,933
45 - 47	2	----									
48	4	----	4,392	18,892	12	6	----	6	5	3,330	----
Unclassified	19	----	46,529	225,530	188	139	27	22	8	84,738	71,256

[1] For definition of the industry see table 1, footnote 1. Reports were classified by number of hours in the full-time workweek reported for wage earners in that department of the operation for which the largest number of man-hours worked was reported. Statistics shown for "Unclassified" represent reports on which number of hours was not reported and reports for central offices reported separately from their associated feldspar operations.

TABLE 12.—SELECTED STATISTICS FOR FELDSPAR OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF DAYS ACTIVE DURING THE YEAR: 1939[1]

(For producing operations only)

NUMBER OF DAYS ACTIVE DURING THE YEAR	Number of mines	Number of preparation plants	Production of feldspar (tons of 2,240 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	59	2	214,009	$981,162	605	512	54	39	21	$385,032	$112,502
100 - 149	7	----	16,321	70,178	46	35	6	5	4	20,019	7,376
150 - 199	5	----	21,132	95,347	61	55	1	5	2	36,617	2,100
200 - 224	3	----	12,289	68,962	38	35	3	----	----	20,574	4,250
225 - 249	8	1	28,273	178,600	94	89	2	3	3	66,369	2,372
250 - 274	11	1	56,446	246,219	127	117	5	5	3	100,375	8,743
275 - 299	4	----	16,907	56,037	26	21	3	2	2	21,682	4,075
300 - 324	6	----	32,773	119,777	78	67	8	3	3	59,972	12,382
325 and over	1	----									
Unclassified	14	----	29,868	146,042	135	93	26	16	4	57,424	71,224

[1] For definition of the industry see table 1, footnote 1. Reports classified by number of days active represent a single mine or a single mine and a single preparation plant reported together; such reports were classified by number of days the mine was in operation for production or development purposes during the year. Statistics shown for "Unclassified" represent reports on which number of days active was not reported and reports for central offices reported separately from their associated feldspar operations.

FLUORSPAR

The products of the fluorspar industry in the United States were valued at $3,398,000 at points of production.[1] Mines produced 305,557 short tons of crude fluorspar and mills recovered 202,367 tons of cleaned or concentrated fluorspar. Lead, and zinc ores, concentrates, and tailings containing 888,838 pounds of recoverable lead and 735,336 pounds of recoverable zinc were obtained as secondary products.

Fluorspar has its most important use in the making of steel. It is also used in making hydrofluoric acid, artificial cryolite for the production of aluminum, and in the glass and enamel industries. Miscellaneous purposes for which fluorspar is used include the manufacture of iron castings, ferroalloys, nickel, Monel metal, cement, carbon electrodes, and calcium carbide; the smelting of gold, silver, and copper ores; and the refining of lead and silver. It finds use also as a paint pigment and as a binder in abrasives.

PRODUCTION

Fluorspar was produced in the United States at 61 mines. Mines in Illinois and Kentucky accounted for 91 percent of the total crude fluorspar mined in 1939. Other production came from Arizona, Colorado, Nevada, New Mexico, and Utah. Of the 53 mills included in the industry 32 were located in Kentucky and 13 in Illinois. Altogether, 368,973 tons of crude fluorspar were treated and 202,367 tons of cleaned or concentrated fluorspar were recovered.

PRINCIPAL EXPENSES

The fluorspar industry paid $1,134,000 in wages—an average of 44 cents per man-hour. Salaried employees were paid $228,000. Supplies and materials consumed during the year cost $506,000; fuel, $118,000; purchased electric energy, $61,000; and work done on contract by other concerns, about $57,000. These reported principal expenses totaled $2,104,000. Buildings, machinery, and equipment costing about $561,000 were erected or installed during the year.

[1]Exclusive of statistics for small fluorspar operations (in Arizona, California, Colorado, Illinois, Kentucky, New Mexico, and Washington) for which neither value of products, nor reported principal expenses, nor cost of buildings, machinery, and equipment during the year amounted to $2,500. These small operations reported a total value of products in 1939 amounting to $41,258, of which $35,214 represented the value of 6,111 tons of crude fluorspar mined during 1939 and $6,044 represented the value added by preparation processes in 1939 in the production of 1,221 tons of cleaned or concentrated fluorspar.

EMPLOYMENT AND WORKING TIME

The number of wage earners employed by the industry averaged 1,287, varying from a minimum of 955 in January to a maximum of 1,573 in November. In addition, 109 salaried employees and 49 proprietors and firm members were reported for October. Employment was greatest in Kentucky where the average number of wage earners was 663 compared with 506 for Illinois and 118 for all other States. Wage earners worked a total of 2,568,000 man-hours, working an average of 8.0 hours per shift. Operations were active the equivalent of 223 full days during the year. The total number of man-shifts worked during the year on days when operations were active for production or development purposes was 310,579, of which 81 percent were worked during the first shift, 15 during the second, and 4 during the third. The average output of crude fluorspar per man-hour worked by wage earners at mines was 0.20 ton for the industry as a whole.

POWER EQUIPMENT AND FUELS

Power equipment in use or available for use at the end of 1939 had an aggregate rating of 20,506 horsepower—an average of about 16 per wage earner. Of the total, 15,956 horsepower represented the rating of prime movers, such as gasoline, Diesel, and steam engines, and 4,550 horsepower represented the rating of electric motors driven by purchased energy. About 90 percent of the total horsepower was for driving stationary or fixed equipment such as mine hoists, electric generators, milling equipment, and pumps. The remaining 10 percent was for driving mobile equipment such as power shovels, tractors, and trucks.

At the end of the year fluorspar operations were equipped with 4 power shovels driven by internal-combustion engines; 1 steam clamshell or orange-peel loader; 1 electric surface scraper loader; and 12 underground scraper loaders, 3 driven by electric hoists and 9 by compressed air. Several operations reported the use of conveyors for handling materials.

The industry consumed 9,241,000 kilowatt-hours of electricity in 1939, of which about 64 percent was generated by the reporting companies for their own use and 36 percent was purchased. The total consumption of coal was 44,610 short tons; gasoline and kerosene, 116,916 gallons; fuel oils, 1,844 barrels; and natural gas, 6,747,000 cubic feet.

TABLE 1.—PRINCIPAL STATISTICS FOR THE FLUORSPAR INDUSTRY IN THE UNITED STATES: 1939, 1929, 1919, 1909, 1902, and 1889[1]

(For producing operations only)

ITEM	1939	1929	1919	1909	1902	1889
Number of operating companies[2]	60	[3]	[3]	13	18	[3]
Number of mines	61	36	72	15	22	[3]
Production of fluorspar (tons of 2,000 pounds)[4]	202,367	156,095	[3]	[3]	48,818	9,500
Value of all products	$3,397,624	$2,858,344	$3,334,880	$288,509	[5] $275,682	[5] $45,835
Value of fluorspar produced	$3,312,219	$2,824,947	$3,286,656	[3]	$275,682	$45,835
Value of other products and services	$85,405	$33,397	$48,224	[3]	[3]	[3]
Number of persons engaged, total	1,445	1,184	1,279	324	[5] 311	[5] 101
Wage earners (average for the year)	1,287	1,053	1,124	290	[6] 269	[7] 97
Salaried employees	109	118	119	26	42	[8] 4
Proprietors and firm members	49	13	36	8	[3]	[3]
Performing manual labor	13	[3]	7	4	[3]	[3]
Principal expenses designated below, total	$2,104,280	$2,222,333	$2,434,729	$253,176	$168,987	[5] $19,238
Wages	$1,134,371	$1,112,322	$1,195,777	$168,445	$110,002	$14,213
Salaries	$228,225	$289,917	$295,299	$24,673	$27,311	
Supplies and materials	$506,477	$626,500	$634,498	$84,695	[9] $31,374	[9] $5,025
Fuel	$117,969	$153,448	$163,239	$24,414		
Purchased electric energy	$60,687	$23,606	----------			
Contract work	$56,551	$16,540	$145,916	$949	$800	[3]
Cost of machinery and equipment erected or installed during year	$455,565	$139,664	[3]	[3]	[3]	[3]
Horsepower rating of prime movers and electric motors driven by purchased energy, total	20,506	6,513	7,138	1,179	669	[3]
Per wage earner	15.9	6.2	6.4	4.1	2.5	[3]
Prime movers	15,956	6,182	7,138	1,179	669	[3]
Electric motors driven by purchased energy	4,550	331	----------	----------	----------	[3]
Horsepower rating of electric motors driven by energy generated by reporting companies	2,956	2,830	729	[10] 140	25	[3]
Fuels consumed:						
Anthracite (tons of 2,000 pounds)	8	----------	----------	[3]	[3]	[3]
Bituminous coal (tons of 2,000 pounds)	44,602	48,925	41,677	[3]	[3]	[3]
Fuel oils (barrels of 42 gallons)	1,844	2,021	151	[3]	[3]	[3]
Gasoline and kerosene (gallons)	116,916	181,049	51,240	[3]	[3]	[3]
Natural gas (thousands of cubic feet)	6,747	----------	----------	[3]	[3]	[3]
Electric energy consumed (thousands of kw.-hrs.), total	9,241	5,110	[3]	[3]	[3]	[3]
Purchased	3,281	744	----------	[3]	[3]	[3]
Generated by reporting companies	5,960	4,366	[3]	[3]	[3]	[3]

[1] The fluorspar industry covers mines engaged primarily in producing crude fluorspar and includes associated preparation plants engaged in cleaning or concentrating fluorspar. Figures for 1939 cover only those producing operations (mines, mills, or mines and mills operated together) for which the value of products, reported principal expenses, or cost of buildings, machinery, and equipment erected or installed during the year amounted to at least $2,500. Figures for 1929 cover only "enterprises" for which the value of products or cost of development work amounted to at least $2,500; the corresponding minimum for 1919 was $500 for value of products and $5,000 for cost of development work. No minimum was placed on the size of operations included for 1909, 1902, and 1889. In 1939, smaller fluorspar operations (in Arizona, California, Colorado, Illinois, Kentucky, New Mexico, and Washington), statistics for which are thus excluded, reported 6,111 tons of crude fluorspar mined, valued at $35,214; 1,717 tons of crude fluorspar milled, valued at $8,608; and 1,221 tons of cleaned or concentrated fluorspar recovered, valued at $14,652. Statistics for mines without products are excluded; only one such mining property was reported at which the reported principal expenses or cost of buildings, machinery, and equipment in 1939 amounted to $2,500 or more.

[2] For 1939 and 1909, companies that submitted more than one report are counted only once in the totals.

[3] Not available.

[4] Figure for 1939 represents cleaned or concentrated fluorspar recovered from crude fluorspar milled during the year. In 1939, 305,557 short tons of crude fluorspar valued at $1,941,857 were mined; 368,973 tons of crude fluorspar valued at $2,453,687 were milled; and 202,367 tons of cleaned or concentrated fluorspar valued at $3,824,049 were recovered. The United States Geological Survey reported that 138,290 short tons of domestic fluorspar valued at $3,525,574 were sold in 1919.

[5] Excludes statistics for items for which information was not available as indicated by footnotes.

[6] On schedules for the 1902 census, concerns were instructed that "The average number employed during the year is the number that would be required, at continuous employment for the twelve months, to produce the quantity of products reported." "In editing the schedule ... the figures for the average number of employees were reduced to a 300-day basis whenever the schedules showed them to be the average number for a shorter period; when it was evident that the employees had worked more than 300 days, the average number for the longer period was allowed to stand."

[7] The 1889 census schedule called for "average number employed," presumably an average for active periods; and requested that figures for wage earners "include those employed by contractors and subcontractors."

[8] Represents foremen only.

[9] For 1909, statistics include amounts paid for purchased power other than electric. Statistics for cost of purchased power for 1902 and 1889 were not explicitly requested but probably are included in part in the figures reported for supplies and materials.

[10] Represents statistics for producing and nonproducing operations.

TABLE 2.—PRINCIPAL STATISTICS FOR THE FLUORSPAR INDUSTRY IN THE UNITED STATES, BY STATE: 1939[1]

(For producing operations only)

ITEM	United States	Colorado	Illinois	Kentucky	New Mexico	Other States[2]
Number of operating companies[3]	60	4	18	30	7	4
Number of mines	61	4	18	30	5	4
Number of mills	53	4	13	32	3	1
Number of persons engaged, total	[4]1,445	50	578	721	72	22
Wage earners (average for the year)	1,287	42	506	663	58	18
Salaried employees	[4]109	7	55	39	6	
Proprietors and firm members	49	1	17	19	8	4
Performing manual labor	13	———	5	4	2	2
Production:						
Crude fluorspar mined (tons of 2,000 pounds)	305,557	13,228	117,465	161,886	6,856	6,122
Cleaned or concentrated fluorspar recovered (tons of 2,000 pounds)[5]	202,567	7,485	84,978	102,956	5,933	1,015
Value of all products	[6]$5,397,624	$105,376	$1,492,607	$1,833,228	$98,711	$67,702
Principal expenses designated below, total	[4]$2,104,280	$67,871	$896,036	$1,006,323	$85,412	26,698
Wages	$1,134,371	$41,580	$487,582	$548,760	$40,228	$16,221
Salaries	[4]$228,225	$6,984	$105,013	$80,708	$11,580	———
Supplies and materials	$506,477	$14,978	$178,992	$285,448	$17,764	$9,295
Fuel	$117,969	$4,329	$62,734	$44,087	$5,657	$1,182
Purchased electric energy	$60,687	———	$16,797	$55,707	$8,183	———
Contract work	$56,551	———	$44,918	$11,833	———	———
Cost of buildings, machinery, and equipment erected or installed during year	$561,411	$353	$476,814	$49,168	$30,748	$4,328
Buildings	$105,846	$152	$77,159	$23,370	$5,165	$2,000
Machinery and equipment, total	$455,565	$201	$399,655	$25,798	$27,583	$2,328
Purchased in new condition	$428,877	$201	$389,444	$20,624	$18,608	———
Purchased in used condition	$26,688	———	$10,211	$5,174	$8,975	$2,328
Total number of man-shifts worked by wage earners	321,039	9,067	127,155	167,814	12,556	4,447
Total number of man-hours worked by wage earners	2,568,288	72,526	1,011,714	1,348,430	102,224	33,394
Average number of hours worked per shift	8.0	8.0	8.0	8.0	8.1	7.5
Average hourly earning of wage earners	$0.44	$0.57	$0.48	$0.41	$0.39	$0.50
Tons of crude fluorspar mined per man-hour[7]	0.202	0.231	0.270	0.170	0.162	0.190
Average number of equivalent full days operations were active	223	158	219	232	220	230
Horsepower rating of power equipment, total	20,506	529	12,129	6,669	849	330
Per wage earner	15.9	12.6	24.0	10.1	14.6	18.3
Stationary equipment	18,523	393	10,998	6,241	700	190
Mobile equipment	1,983	136	1,130	428	149	140
Electric energy consumed (thousands of kw.-hrs.), total	9,241	2	6,535	2,315	384	5
Purchased	3,281	———	853	2,044	384	———
Generated by reporting companies	5,960	2	5,682	271	———	5

[1]For definition of the industry see table 1, footnote 1.
[2]Arizona, 1 mine; Nevada, 2 mines and 1 mill; and Utah, 1 mine.
[3]Companies with operations in more than 1 State are counted only once in the totals.
[4]Includes statistics for central-office employees in Missouri.
[5]Represents fluorspar recovered from the following quantities of fluorspar-bearing material treated: United States, 368,973 tons; Colorado, 13,226; Illinois, 152,292; Kentucky, 191,100; New Mexico, 11,105; other States, 1,250.
[6]Includes $3,512,219 representing the value of crude fluorspar mined in 1939 and the value added in 1939 by preparation or milling; $85,405 representing the value of lead and zinc ores, concentrates, and tailings containing 888,838 pounds of recoverable lead and 735,336 pounds of recoverable zinc; the value of electric energy generated and sold; and receipts for services performed for other concerns.
[7]Computed by dividing number of tons of crude fluorspar mined by number of man-hours worked by wage earners in mining on active and on inactive days.

TABLE 3.—NUMBER OF WAGE EARNERS IN THE FLUORSPAR INDUSTRY IN THE UNITED STATES, BY STATE AND BY MONTH: 1939[1]

(For producing operations only)

STATE	Average for the 12 months	NUMBER RECEIVING PAY DURING PAY-ROLL PERIOD ENDING NEAREST THE 15TH OF THE MONTH											
		January	February	March	April	May	June	July	August	September	October	November	December
United States, total	1,287	955	972	1,076	1,166	1,253	1,303	1,357	1,381	1,410	1,470	1,573	1,532
Colorado	42	15	15	15	45	46	49	48	48	51	54	60	60
Illinois	506	403	368	412	448	473	514	528	532	559	588	619	630
Kentucky	663	484	529	585	608	669	677	698	716	718	745	802	749
New Mexico	58	64	46	50	51	50	49	63	66	64	63	69	66
Other States	18	9	14	14	14	15	14	20	19	18	20	23	27

[1]For definition of the industry see table 1, footnote 1.

TABLE 4.—EMPLOYMENT AND WORKING TIME IN THE FLUORSPAR INDUSTRY IN THE UNITED STATES, BY DEPARTMENT AND BY STATE: 1939[1]

(For producing operations only)

DEPARTMENT	United States	Colorado	Illinois	Kentucky	New Mexico	Other States
Average number of wage earners on active days, total	1,391	55	558	702	57	19
At mines, total	837	44	264	480	31	18
Underground	651	39	221	349	25	17
Open-pit	5	———	3	———	2	———
Surface shops and yards	181	5	40	131	4	1
At mills	554	11	294	222	26	1
Average number of equivalent full days operations were active	223	158	219	232	220	230
At mines	221	159	200	241	170	235
Underground	217	157	205	234	161	237
Open-pit	137	———	99	———	195	———
Surface shops and yards	239	172	183	260	216	210
At mills	227	155	236	212	280	130
Number of man-shifts worked by wage earners, total	321,039	9,067	127,155	167,814	12,556	4,447
On active days, total	310,579	8,685	122,364	162,607	12,556	4,367
At mines, total	184,934	6,978	52,837	115,597	5,285	4,237
Underground	140,992	6,120	45,234	81,582	4,029	4,027
Open-pit	686	———	296	———	390	———
Surface shops and yards	43,256	858	7,307	34,015	866	210
At mills	125,645	1,707	69,527	47,010	7,271	130
On inactive days	10,460	382	4,791	5,207	———	80
Number of man-hours worked by wage earners, total	2,568,288	72,526	1,011,714	1,348,430	102,224	33,394
On active days, total	2,485,186	69,470	974,280	1,306,458	102,224	32,754
At mines, total	1,477,769	55,815	419,497	928,402	42,276	31,779
Underground	1,124,440	48,951	358,371	654,791	32,228	30,099
Open-pit	5,488	———	2,368	———	3,120	———
Surface shops and yards	347,841	6,864	58,758	273,611	6,928	1,680
At mills	1,007,417	13,655	554,783	378,056	59,948	975
On inactive days	83,102	3,056	37,434	41,972	———	640

[1]For definition of the industry see table 1, footnote 1.

TABLE 5.—NUMBER OF MAN-SHIFTS WORKED BY WAGE EARNERS ON ACTIVE DAYS AT MINES AND AT MILLS IN THE FLUORSPAR INDUSTRY IN THE UNITED STATES, BY SHIFT AND BY STATE: 1939[1]

(For producing operations only)

SHIFT AND DEPARTMENT	UNITED STATES		Colorado	Illinois	Kentucky	New Mexico	Other States
	Number	Percent of total					
Number of man-shifts worked by wage earners on active days, total	310,579	100.0	8,685	122,364	162,607	12,556	4,367
During first shift	251,734	81.1	8,685	105,020	123,962	9,700	4,367
During second shift	45,165	14.5	———	12,094	31,643	1,428	———
During third shift	13,680	4.4	———	5,250	7,002	1,428	———
At mines, total	184,934	100.0	6,978	52,837	115,597	5,285	4,237
During first shift	142,985	77.3	6,978	43,625	82,860	5,285	4,237
During second shift	35,678	19.3	———	8,028	27,650	———	———
During third shift	6,271	3.4	———	1,184	5,087	———	———
At mills, total	125,645	100.0	1,707	69,527	47,010	7,271	130
During first shift	108,749	86.6	1,707	61,395	41,102	4,415	130
During second shift	9,487	7.5	———	4,066	3,993	1,428	———
During third shift	7,409	5.9	———	4,066	1,915	1,428	———

[1]For definition of the industry see table 1, footnote 1. Figures refer only to man-shifts worked by wage earners on active days; they exclude statistics for inactive days, when only maintenance work was carried on.

TABLE 6.—QUANTITY OF FUEL AND ELECTRIC ENERGY CONSUMED IN THE FLUORSPAR INDUSTRY IN THE UNITED STATES, BY STATE AND BY KIND: 1939 [1]

(For producing operations only)

STATE	FUEL					ELECTRIC ENERGY (thousands of kilowatt-hours)		
	Anthracite (tons of 2,000 pounds)	Bituminous coal (tons of 2,000 pounds)	Fuel oils (barrels of 42 gallons)	Gasoline and kerosene (gallons)	Natural gas (thousands of cubic feet)	Total	Purchased	Generated by reporting companies
United States, total	8	44,602	1,844	116,916	6,747	9,241	3,281	5,960
Colorado	-------	961	-------	4,521	-------	2	-------	2
Illinois	8	27,598	1,485	30,226	-------	6,536	853	5,682
Kentucky	-------	16,043	359	52,599	-------	2,315	2,044	271
New Mexico	-------	-------	-------	22,190	6,747	384	384	-------
Other States	-------	-------	-------	7,380	-------	5	-------	5

[1] For definition of the industry see table 1, footnote 1.

TABLE 7.—NUMBER AND HORSEPOWER RATING OF PRIME MOVERS AND ELECTRIC MOTORS IN THE FLUORSPAR INDUSTRY IN THE UNITED STATES, BY TYPE AND BY STATE: 1939 [1]

(For producing operations only)

STATE AND TYPE OF EQUIPMENT	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY											ELECTRIC MOTORS DRIVEN BY ENERGY GENERATED BY REPORTING COMPANIES	
	Aggregate horsepower	Prime movers								Electric motors driven by purchased energy			
		Total		Driving generators		Not driving generators		Ordinarily idle (included in preceding columns)					
		Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower
United States, total	20,506	220	15,956	16	6,734	204	9,222	19	2,300	487	4,550	158	2,966
Stationary [2]	18,523	162	14,003	16	6,734	146	7,269	18	2,285	485	4,520	153	2,921
Mobile [3]	1,983	58	1,953	-------	-------	58	1,953	1	15	2	30	5	45
Colorado, total	529	12	529	1	80	11	449	4	56	-------	-------	4	12
Stationary [2]	393	10	393	1	80	9	313	4	56	-------	-------	4	12
Mobile [3]	136	2	136	-------	-------	2	136	-------	-------	-------	-------	-------	-------
Illinois, total	12,129	95	10,279	11	6,289	84	3,990	7	1,389	307	1,850	146	2,699
Stationary [2]	10,999	60	9,149	11	6,289	49	2,860	7	1,389	307	1,850	142	2,674
Mobile [3]	1,130	35	1,130	-------	-------	35	1,130	-------	-------	-------	-------	4	25
Kentucky, total	6,669	86	4,250	3	325	83	3,925	8	855	149	2,419	6	250
Stationary [2]	6,241	71	3,852	3	325	68	3,527	7	840	147	2,389	5	230
Mobile [3]	428	15	398	-------	-------	15	398	1	15	2	30	1	20
New Mexico, total	849	14	568	-------	-------	14	568	-------	-------	31	281	-------	-------
Stationary [2]	700	12	419	-------	-------	12	419	-------	-------	31	281	-------	-------
Mobile [3]	149	2	149	-------	-------	2	149	-------	-------	-------	-------	-------	-------
Other States, total	330	13	330	1	40	12	290	-------	-------	-------	-------	2	5
Stationary [2]	190	9	190	1	40	8	150	-------	-------	-------	-------	2	5
Mobile [3]	140	4	140	-------	-------	4	140	-------	-------	-------	-------	-------	-------

[1] For definition of the industry see table 1, footnote 1.
[2] Horsepower rating of engines, motors, etc. for driving stationary or fixed equipment such as mine hoists, electric generators, milling equipment, and pumps.
[3] Horsepower rating of engines, motors, etc. for driving mobile equipment such as power shovels, clamshell loaders, and trucks.

TABLE 8.—NUMBER OF POWER-LOADING MACHINES IN THE FLUORSPAR INDUSTRY IN THE UNITED STATES, BY TYPE, BY KIND OF POWER USED, BY SIZE, AND BY STATE: 1939 [1]

(For producing operations only)

TYPE OF MACHINE, KIND OF POWER USED, AND SIZE	United States	Colorado	Illinois	Kentucky
Surface:				
Power shovels [2]	4	----	3	1
Scraper loaders [3]	1	----	----	1
Clamshells and orange-peel loaders [4]	1	----	1	----
Other types [5]	2	----	2	----
Underground:				
Scraper loaders (including slushers), total	12	1	3	8
Kind of power used:				
Electric	3	----	----	3
Compressed air	9	1	3	5
Horsepower rating of hoists, total	12	1	3	8
Less than 10	9	1	3	5
10 - 25	3	----	----	3

[1] For definition of the industry see table 1, footnote 1. No power-loading machines were reported for Arizona, Nevada, New Mexico, and Utah.
[2] All were driven by internal-combustion engines and had dipper capacities of less than 3 cubic yards.
[3] Driven by electric power; hoist rated at 10 - 25 horsepower.
[4] Driven by steam power.
[5] Driven by internal-combustion engines.

TABLE 9.—SELECTED STATISTICS FOR INCORPORATED AND FOR UNINCORPORATED OPERATING COMPANIES IN THE FLUORSPAR INDUSTRY IN THE UNITED STATES, BY STATE: 1939 [1]

(For producing operations only)

STATE AND TYPE OF OWNERSHIP	Number of operating companies [2]	Number of mines	Number of mills	Production of crude fluorspar (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
						Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
									Total	Performing manual labor		
United States, total	60	61	53	305,557	$3,397,624	[3]1,445	1,287	[3]109	49	13	$1,134,371	[3]$228,225
Incorporated	18	20	21	220,006	2,417,207	[3]975	881	[3]94	----	----	856,317	[3]205,072
Unincorporated	42	41	32	85,551	980,417	470	406	15	49	13	278,054	23,153
Colorado, total	4	4	4	13,228	105,376	50	42	7	1	----	41,580	6,984
Incorporated	3	3	3	13,228	105,376	50	42	7	1	----	41,580	6,984
Unincorporated	1	1	1									
Illinois, total	18	18	13	117,465	1,492,607	578	506	55	17	5	487,582	105,013
Incorporated	7	9	7	89,773	1,188,289	444	397	47	----	----	418,937	89,094
Unincorporated	11	9	6	27,692	304,318	134	109	8	17	5	68,645	15,919
Kentucky, total	30	30	32	181,886	1,633,228	721	665	39	19	4	548,760	80,708
Incorporated	8	8	9	117,317	1,070,343	449	416	33	----	----	374,710	73,799
Unincorporated	22	22	25	44,569	562,885	272	247	6	19	4	174,050	6,909
New Mexico, total	7	5	3	6,856	98,711	72	58	6	8	2	40,228	11,580
Incorporated	2	----	2	6,856	98,711	72	58	6	8	2	40,228	11,580
Unincorporated	5	5	1									
Other States [4]	4	4	1	6,122	67,702	22	18	----	4	2	18,221	----

[1] For definition of the industry see table 1, footnote 1.
[2] Companies with operations in more than 1 State are counted only once in the totals.
[3] Includes statistics for central-office employees in Missouri.
[4] Unincorporated only; no incorporated operating companies were reported.

TABLE 10.—SELECTED STATISTICS FOR FLUORSPAR OPERATIONS IN THE UNITED STATES, CLASSIFIED BY VALUE OF PRODUCTS AND BY STATE: 1939 [1]

(For producing operations only)

STATE AND VALUE OF PRODUCTS	Number of mines	Number of mills	Production of crude fluorspar (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	61	53	305,557	$5,397,624	[2] 1,445	1,287	[2] 109	49	13	$1,134,371	[2] $228,225
$1 - $19,999	32	27	29,038	285,323	246	209	8	29	11	117,737	5,763
$20,000 - $49,999	7	8	21,820	293,879	143	119	14	10	1	79,810	22,391
$50,000 - $99,999	4	4	35,949	397,576	146	135	11	———	———	125,141	32,375
$100,000 - $249,999	11	10	216,453	2,388,169	876	806	63	7	———	803,383	124,990
$250,000 - $499,999	1	2									
Unclassified	6	2	2,297	32,677	[2] 34	18	[2] 13	3	1	8,300	[2] 42,706
Colorado, total	4	4	13,228	105,376	50	42	7	1	———	41,580	6,98
$1 - $19,999	3	3	13,228	105,376	48	42	5	1	———	41,580	6,488
$50,000 - $99,999	1	1									
Unclassified	———	———	———	———	2	———	2	———	———	———	496
Illinois, total	18	13	117,465	1,492,607	578	506	55	17	5	487,582	105,013
$1 - $19,999	5	3	4,240	48,478	45	39	1	5	3	26,579	900
$20,000 - $49,999	4	4	32,369	238,984	117	103	- 7	7	1	75,708	12,320
$50,000 - $99,999	2	———									
$100,000 - $249,999	5	5	80,856	1,205,145	416	364	47	5	1	385,295	91,793
$250,000 - $499,999	———	1									
Unclassified	2	———									
Kentucky, total	30	32	161,886	1,633,228	721	663	39	19	4	548,760	80,708
$1 - $19,999	16	18	11,112	134,877	114	101	1	12	4	46,978	1,.00
$20,000 - $49,999	2	4									
$50,000 - $99,999	1	2	98,645	1,108,374	413	384	25	6	———	342,170	45,374
$100,000 - $249,999	6	5									
$250,000 - $499,999	1	1	52,129	389,977	194	178	15	1	———	159,612	34,134
Unclassified	4	2									
New Mexico, total	5	3	6,856	98,711	72	58	6	8	2	40,228	11,580
$1 - $19,999	5	2	6,856	98,711	72	58	6	8	2	40,228	11,580
$50,000 - $99,999	———	1									
Other States, total	4	1	6,122	67,702	22	18	———	4	2	16,221	———
$1 - $19,999	3	1	6,122	67,702	22	18	———	4	2	16,221	———
$20,000 - $49,999	1	———									

[1] For definition of the industry see table 1, footnote 1. Reports classified by value of products represent a single mine, a single mill, or a single mine and a single mill reported together. Statistics shown for "Unclassified" represent reports for more than one mine and reports for central offices reported separately from their associated fluorspar operations.

[2] Includes statistics for central-office employees in Missouri.

TABLE 11.—SELECTED STATISTICS FOR FLUORSPAR OPERATIONS IN THE UNITED STATES, CLASSIFIED BY QUANTITY OF PRODUCT: 1939 [1]

(For producing operations only)

QUANTITY OF PRODUCT (TONS OF 2,000 POUNDS)	Number of mines	Number of mills	Production of crude fluorspar (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	61	53	305,557	$5,397,624	1,445	1,287	109	49	13	$1,134,371	$228,225
1 - 249	2	1	3,358	38,064	55	48	2	7	2	22,769	1,225
250 - 499	8	7									
500 - 749	7	4	4,253	32,219	35	31	———	4	2	15,840	———
750 - 999	4	3	3,291	29,892	17	13	1	3	———	8,424	83
1,000 - 1,999	8	5	10,310	93,579	62	52	1	9	2	33,151	1,200
2,000 - 4,999	10	7	26,101	333,641	165	147	9	9	1	115,295	15,020
5,000 - 9,999	6	5	41,490	516,991	190	168	16	6	1	135,728	25,674
10,000 - 14,999	6	4	72,366	646,829	249	237	9	3	———	235,416	15,238
15,000 and over	4	3	142,091	881,266	351	333	18	———	———	331,120	38,005
Unclassified	6	14	2,297	825,143	321	260	53	8	5	236,628	131,780

[1] For definition of the industry see table 1, footnote 1. Reports classified by quantity of product represent a single mine, or a single mine and a single mill reported together. Statistics shown for "Unclassified" represent: Reports for more than one mine; reports for mills only; and reports for central offices reported separately from their associated fluorspar operations.

TABLE 12.—SELECTED STATISTICS FOR FLUORSPAR OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF WAGE EARNERS: 1939[1]

(For producing operations only)

NUMBER OF WAGE EARNERS	Number of mines	Number of mills	Production of crude fluorspar (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	61	53	305,557	$3,397,624	1,445	1,287	109	49	13	$1,134,371	$228,225
1 - 5	14	10	11,532	101,380	72	55	2	15	7	37,705	408
6 - 20	9	15	17,585	508,107	229	194	24	11	1	126,708	49,156
21 - 50	10	10	98,431	1,155,676	417	382	28	7	----------	377,664	54,331
51 - 100	3	1	115,423	1,148,855	473	437	36	-----	----------	436,078	71,924
101 - 250	1	2									
Unclassified	24	15	52,586	483,606	254	219	19	16	5	156,216	52,406

[1] For definition of the industry see table 1, footnote 1. Reports classified by average number of wage earners employed during the year represent a single mine, a single mill, or a single mine and a single mill reported together. Statistics shown for "Unclassified" represent: Reports for more than one mine; reports on which number of wage earners, by month, was not adequately reported; and reports for central offices reported separately from their associated fluorspar operations.

TABLE 13.—SELECTED STATISTICS FOR FLUORSPAR OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK: 1939[1]

(For producing operations only)

HOURS PER WEEK	Number of mines	Number of mills	Production of crude fluorspar (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	61	53	305,557	$3,397,624	1,445	1,287	109	49	13	$1,134,371	$228,225
1 - 34	------	1	73,884	863,863	395	342	44	9	5	321,424	80,865
40	7	8									
41 - 42	8	8	31,471	294,738	154	134	10	10	3	106,237	11,920
43 - 44	8	6	102,069	1,172,864	410	374	29	7	----------	375,363	66,048
48	6	5	33,222	457,201	157	148	6	3	----------	133,931	16,086
54 - 59	1	1									
Unclassified	31	24	65,961	608,958	329	289	20	20	5	197,416	53,306

[1] For definition of the industry see table 1, footnote 1. Reports were classified by number of hours in the full-time workweek reported for wage earners in that department of the operation for which the largest number of man-hours worked was reported. Statistics shown for "Unclassified" represent reports on which number of hours was not reported and reports for central offices reported separately from their associated fluorspar operations.

TABLE 14.—SELECTED STATISTICS FOR FLUORSPAR OPERATIONS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF DAYS ACTIVE DURING THE YEAR: 1939[1]

(For producing operations only)

NUMBER OF DAYS ACTIVE DURING THE YEAR	Number of mines	Number of mills	Production of crude fluorspar (tons of 2,000 pounds)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
					Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
								Total	Performing manual labor		
United States, total	61	53	305,557	$3,397,624	1,445	1,287	109	49	13	$1,134,371	$228,225
50 - 99	2	------	5,115	68,701	53	45	3	5	3	27,684	2,183
100 - 149	4	4									
150 - 199	6	5	29,426	321,405	122	99	10	13	3	89,673	18,471
200 - 224	1	1									
225 - 249	5	5	69,871	576,818	276	254	18	4	1	219,921	31,977
250 - 274	3	3	27,777	367,608	133	118	14	1	----------	106,673	25,310
275 - 299	5	3	72,823	737,819	276	256	18	2	1	268,610	40,414
300 - 324	5	6	35,411	720,444	262	234	24	4	----------	228,426	55,709
325 and over	------	1									
Unclassified	30	25	65,134	604,829	323	281	22	20	5	193,384	54,161

[1] For definition of the industry see table 1, footnote 1. Reports classified by number of days active represent a single mine, a single mill, or a single mine and a single mill reported together; such reports for a single mine or a single mill were classified by number of days the mine or mill was in operation for production or development purposes during the year; such reports for a single mine and a single mill reported together were classified by number of days the mine was in operation during the year. Statistics shown for "Unclassified" represent: Reports for more than one mine; reports on which number of days active was not reported; and reports for central offices reported separately from their associated fluorspar operations.

GRAPHITE, LITHIUM MINERALS, PINITE, AND ICELAND SPAR

Graphite, lithium-minerals, pinite, and Iceland-spar operations reported products valued at $93,000 at points of production, employed an average of 36 wage earners, and paid $26,000 in wages.

Graphite is used in the manufacture of foundry facings, crucibles, paints, electrodes, pencils, batteries, lubricants, brushes for electrical equipment, and other products. Lithium minerals are used in the production of glass, ceramics, and such chemical compounds as lithium carbonate, lithium chloride, lithium hydroxide, and lithium fluoride. Pinite is a refractory material used in the manufacture of firebrick. Iceland spar is used in the manufacture of prisms for scientific instruments.

Graphite operations were located in Nevada and New York; lithium-minerals operations in South Dakota; pinite, in Nevada; and Iceland spar in New Mexico. In addition, graphite was produced as a secondary product of kyanite operations in Georgia and lithium minerals as a secondary product of the potash industry in California and of feldspar and mica operations in South Dakota.

For distribution of operations by value of products, number of wage earners, number of days active, number of hours per wage earner in the full-time workweek, and by type of ownership, see General Summary tables 8, 15, 17, 18, and 23, respectively.

TABLE 1.—PRINCIPAL STATISTICS FOR GRAPHITE, LITHIUM-MINERALS, PINITE, AND ICELAND-SPAR OPERATIONS IN THE UNITED STATES: 1939 [1]

Number of operating companies	6	Cost of buildings, machinery, and equipment erected or installed during year	$2,060
Number of mines [2]	6	Buildings	$785
Number of preparation plants [2]	2	Machinery and equipment [5]	$1,275
Number of persons engaged, total	48	Total number of man-shifts worked by wage earners	7,916
Wage earners (average for the year)	36	Total number of man-hours worked by wage earners	63,329
Salaried employees	10	Average number of hours worked per shift	8.0
Proprietors and firm members [3]	2	Average hourly earning of wage earners	$0.41
Value of all products [4]	$96,199	Average number of equivalent full days operations were active	139
Principal expenses designated below, total	$63,292	Horsepower rating of power equipment, total	679
Wages	$26,014	Per wage earner	18.9
Salaries	$12,919	Stationary equipment [6]	496
Supplies and materials	$16,423	Mobile equipment [7]	183
Fuel	$3,436	Electric energy consumed (thousands of kw.-hrs.) [8]	300
Purchased electric energy	$5,750		
Contract work	$750		

[1] Figures cover producing operations (mines, preparation plants, and mines operated together with preparation plants) for which value of products, reported principal expenses, or cost of buildings, machinery, or equipment during the year amounted to $2,500 or more. No nonproducing operations were reported. Statistics are for operations engaged principally in the recovery and preparation of any of the specified minerals, hence do not cover the production of the specified minerals as secondary products of operations classified in other mineral industries. Statistics for the production of artificial graphite are also excluded.

[2] Graphite: Nevada, 1 open-cut mine; New York, 1 open-cut mine and 1 plant. Lithium minerals: South Dakota, 2 combination (open-cut and underground) mines. Pinite: Nevada, 1 open-cut mine. Iceland spar: New Mexico, 1 open-cut mine and 1 plant.

[3] No proprietors or firm members were reported performing manual labor.

[4] Includes $92,253 representing the value at points of production of graphite, Iceland spar, lithium minerals, and pinite produced during the year and $3,946 representing the value of beryl, feldspar, and mica obtained as secondary products.

[5] Purchased in used condition; none was reported purchased in new condition.

[6] Aggregate horsepower rating of engines and motors for driving stationary or fixed equipment such as hoists, pumps, ventilating fans, compressors, crushers, etc. Represents 2 prime movers (not driving generators), rated at 115 horsepower and 21 electric motors (driven by purchased energy) rated at 381 horsepower.

[7] Aggregate horsepower rating of engines and motors for driving mobile equipment such as power shovels, trucks, etc. Represents 3 prime movers (not driving generators) rated at 183 horsepower.

[8] Represents purchased electric energy. No electric energy was reported generated and consumed by the reporting companies.

TABLE 2.—NUMBER OF WAGE EARNERS AT GRAPHITE, LITHIUM-MINERALS, PINITE, AND ICELAND-SPAR OPERATIONS IN THE UNITED STATES, BY MONTH: 1939 [1]

MONTH	Number	MONTH	Number	MONTH	Number
Average	36	April	36	September	21
		May	44	October	20
January	41	June	44	November	22
February	47	July	39	December	44
March	49	August	21		

[1] For explanation of operations covered see table 1, footnote 1.

TABLE 3.—EMPLOYMENT AND WORKING TIME AT GRAPHITE, LITHIUM-MINERALS, PINITE, AND ICELAND-SPAR OPERATIONS IN THE UNITED STATES, BY DEPARTMENT: 1939 [1]

Average number of wage earners on active days, total	55	Number of man-shifts worked by wage earners, total	7,916
		On active days, total	7,666
At mines, total [2]	28	At mines, total [2]	4,468
Underground	9	Underground	2,061
Open-pit	19	Open-pit	2,407
At preparation plants	27	At preparation plants	3,198
		On inactive days	250
Average number of equivalent full days operations were active	139	Number of man-hours worked by wage earners, total	63,329
		On active days, total	61,329
At mines [2]	160	At mines, total [2]	35,746
Underground	229	Underground	16,491
Open-pit	127	Open-pit	19,255
At preparation plants	118	At preparation plants	25,583
		On inactive days	2,000

[1] For explanation of operations covered see table 1, footnote 1.

[2] No employment was reported at surface shops and yards.