

## FLUID FUELS

### SALIENT STATISTICS FOR 1939

The mineral fluid-fuels industries in the United States in 1939, including operations producing crude petroleum, natural gas, and natural gasoline, and those engaged in oil- and gas-field exploration and development work accounted for \$1,676,135,000, or 49 percent, of the total value of products of all mineral industries, and, including contractors performing oil- and gas-field services, engaged 199,631 persons, or 23 percent, of the total number in the mineral industries. (See table 1 in General Summary.) The 1939 census was the first regular survey of crude-petroleum and natural-gas and natural-gasoline industries since 1919 and includes the first complete canvass of the operations of contractors performing oil- and gas-field services.

Reports were received and tabulated from 9,617 companies, including 7,732 companies operating 347,645 oil and gas wells, 295 companies operating 734 natural-gasoline plants, 1,888 contracting concerns performing many types of oil- and gas-field services, and 307 companies engaged in oil- and gas-field development work for their own account. (See table 1.) Oil- and gas-field operations were conducted in 32 States. In terms of value of products, the five leading States in order were Texas, California, Oklahoma, Louisiana, and Illinois. In terms of number of persons engaged at producing operations, the leading States were Texas, Oklahoma, California, Louisiana, and Pennsylvania. The six States named accounted for 84 percent of the total value of products and for 78 percent of the total number of persons engaged. (See table 4.)

Of the total value of products reported by the fluid-fuels industries, \$1,251,905,000 represented the value of 1,228,134,000 barrels of crude petroleum produced; \$115,350,000, the value of 2,929,185 million cubic feet of natural gas produced and marketed; \$88,922,000, the value of 2,177,846,000 gallons of natural gasoline produced; \$16,115,000, the value of miscellaneous secondary products and services rendered to other companies; and \$203,844,000, the total amount received or due for oil- and gas-field services performed by contractors.

The fluid-fuels industries in 1939, excluding contract-service operations, paid \$168,912,000 in wages and \$84,251,000 in salaries. Expenditures during the year for supplies and materials (excluding natural gas treated) amounted to \$87,191,000; for fuel, \$26,247,000; for purchased electric energy, \$7,101,000; and for work done on contract, \$203,018,013. These principal expenses totaled \$576,720,000. Buildings erected and machinery and equipment installed during the year cost \$212,197,000. Of this amount, \$200,980,000 represented expenditures for machinery and equipment; the remainder was spent for new buildings and major alterations to existing structures. Statistics were also collected on the cost of drilling and equipping wells; these are summarized in table 2 and in the sections on "Crude Petroleum and Natural Gas" and "Oil- and Gas-Field Services Performed by Contractors."

The fluid-fuels industries, including contract-service operations, employed an average of 153,898 wage earners and 37,704 salaried employees who were paid \$225,331,000 in wages and \$99,121,000 in salaries. In addition, the industries reported 8,029 proprietors and firm members, including 1,985 performing manual labor. Of the total number of persons engaged, 71 percent were in the crude-petroleum and natural-gas industry, 5 percent in the natural-gasoline industry, and 24 percent were reported by oil- and gas-field contractors.

Wage earners in the group of industries worked a total of 273,787,000 man-hours. Of this total, 55 percent was devoted to operating and maintaining wells and 27 percent to drilling wells and rig building. Over three-fourths of the total number

of wage earners were full-time workers. Hourly earning of wage earners averaged 82 cents at crude-petroleum and natural-gas producing operations, 79 cents at natural-gasoline producing operations, and 85 cents at contract-service operations. This is considerably higher than the average hourly earning in other mineral industries such as bituminous coal (79 cents), metallic-ores industries (67 cents), and the stone industries (50 cents).

The total horsepower rating of prime movers and electric motors driven by purchased energy reported by the fluid-fuels industries amounted to 5,265,666 horsepower, or 37 percent of the total for all mineral industries. Prime movers accounted for 91 percent of the total horsepower reported by the fluid-fuels industries and 57 percent of the total for prime movers reported by all mineral industries. Horsepower rating per wage earner employed averaged 32.2 at crude-petroleum and natural-gas operations; 92.7 at natural-gasoline operations, and 27.4 at contract-service operations.

Fuels consumed by the fluid-fuels industries, excluding contract-service operations (for which such statistics were not collected), include 26,456 short tons of coal, 2,345,300 barrels of fuel oils, 17,969,421 gallons of gasoline and kerosene, and 462,331,466,000 cubic feet of natural gas. Electric energy consumed during the year amounted to 837,506,000 kilowatt-hours of which over three-fourths was purchased and the remainder generated by the reporting companies.

### CHANGES IN THE FLUID-FUELS INDUSTRIES

In contrast to the solid-fuel and other basic mineral industries in the United States, the fluid-fuels industries are comparatively new, exhibiting rapid recent growth. The value of all products of the fluid-fuels industries increased by 414 percent between 1909 and 1919 and 63 percent between 1919 and 1939, whereas the value of all products of all other mineral industries increased by 120 percent between 1909 and 1919 and decreased 27 percent between 1919 and 1939. Similarly, the number of persons engaged in the fluid-fuels industries increased 112 percent between 1909 and 1919 and 21 percent between 1919 and 1939; the number of persons engaged in all other mineral industries, however, declined by 4 percent between 1909 and 1919, and by 32 percent between 1919 and 1939. (See table 3 in this section and table 3 in the General Summary.)

The growth of the fluid-fuels industries since 1909 is more marked in output than employment, for output per man has increased greatly. The number of barrels of crude petroleum increased from 171,559,000 in 1909, to 350,112,000 in 1919, and to 1,228,134,000 in 1939. The output of natural gas in terms of thousands of cubic feet rose from 431,852,000 in 1909, to 727,295,000 in 1919, and to 2,929,185,000 in 1939. The most rapid growth was exhibited by the natural-gasoline industry; its output of natural gasoline increased from 271,000 gallons in 1909, to 454,089,000 gallons in 1919, and to 2,177,846,000 gallons in 1939.

State statistics on value of products and employment at producing operations in the fluid-fuels industries for 1919 and 1939 also indicate extensive changes. (See table 4.) Largest percentage increases in both value of products and number of persons engaged occurred in Colorado and New Mexico, Arkansas, Montana, Texas, Louisiana, California, and Illinois. Largest percentage declines are recorded for Ohio, West Virginia, Kentucky, Indiana, Pennsylvania, and Oklahoma. Oil and gas fields are undergoing continuous change; while old and less productive oil and gas pools are being exhausted new areas are being developed, and there is a continuous shift of the industry to the new and more productive areas.

TABLE 1.—PRINCIPAL STATISTICS FOR THE CRUDE-PETROLEUM AND NATURAL-GAS AND THE NATURAL-GASOLINE INDUSTRIES, AND FOR OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS IN THE UNITED STATES: 1939<sup>1</sup>

ITEM	All operations	PRODUCING OPERATIONS		Oil- and gas-field services performed by contractors	Nonproducing crude-petroleum and natural-gas and natural-gasoline operations
		Crude petroleum and natural gas	Natural gasoline		
Number of operating companies <sup>2</sup> .....	9,817	7,782	295	1,888	307
Number of oil and gas wells producing on December 31, 1939.....	347,845	347,845	.....	.....	.....
Number of gasoline plants.....	738	.....	734	.....	2
Value of products, total.....	\$1,676,135,256	<sup>3</sup> \$1,375,953,578	<sup>3</sup> \$98,337,763	\$203,843,917	.....
Crude petroleum.....	\$1,251,904,665	\$1,251,904,665	.....	.....	.....
Marketed natural gas.....	\$115,349,865	<sup>3</sup> \$115,349,865	(3)	.....	.....
Natural and "drip" gasoline.....	\$88,922,393	\$1,179,545	\$87,742,848	.....	.....
Other products.....	\$8,719,161	\$251,350	\$8,487,811	.....	.....
Amounts received or due for services performed for others.....	\$211,239,372	\$7,268,351	\$127,104	\$203,843,917	.....
Number of persons engaged, total.....	199,831	141,592	10,347	46,939	753
Wage earners (average for the year, including inactive periods).....	153,898	105,166	8,332	40,061	339
Salaried employees.....	37,704	30,322	2,005	5,153	224
Proprietors and firm members (not applicable to corporations).....	8,029	6,104	10	1,725	190
Performing manual labor.....	1,985	1,304	2	637	42
Principal expenses designated below, total.....	\$648,008,721	\$533,947,385	\$37,855,612	\$71,289,073	\$4,918,651
Wages.....	\$225,331,016	\$155,170,484	\$13,212,248	\$56,419,177	\$529,107
Salaries.....	\$99,121,149	\$79,792,331	\$5,051,939	\$14,889,896	\$408,983
Supplies and materials.....	\$37,490,928	\$78,037,445	\$8,652,948	(5)	\$500,535
Fuel.....	<sup>4</sup> \$28,246,898	\$19,459,824	\$8,800,147	(5)	\$188,927
Purchased electric energy.....	<sup>4</sup> \$7,100,717	\$8,738,867	\$354,702	(5)	\$7,148
Contract work.....	<sup>4</sup> \$203,018,013	\$195,748,434	\$3,983,628	(5)	\$3,285,951
Cost of buildings, machinery, and equipment erected or installed during year.....	<sup>4</sup> \$212,197,361	\$198,165,564	\$13,029,885	(5)	\$1,001,932
Buildings.....	<sup>4</sup> \$11,217,807	\$9,588,049	\$1,480,464	(5)	\$169,294
Machinery and equipment, total.....	<sup>4</sup> \$200,979,574	\$188,577,515	\$11,569,421	(5)	\$832,638
Purchased in new condition.....	<sup>4</sup> \$188,468,656	\$177,097,893	\$10,819,945	(5)	\$750,798
Purchased in used condition.....	<sup>4</sup> \$12,510,918	\$11,479,622	\$949,476	(5)	\$81,840
Number of man-hours worked by wage earners, total.....	273,786,788	190,078,212	16,633,710	66,479,163	595,703
Operating and maintaining wells.....	151,707,112	151,283,141	.....	399,596	24,375
Drilling wells and rig building.....	72,728,801	51,387,839	.....	40,809,481	531,501
Doing other work.....	49,350,875	7,407,232	16,633,710	25,270,106	39,827
Average number of wage earners on active days, total.....	164,594	111,801	8,608	43,306	877
Full-time workers.....	126,221	90,368	7,711	27,491	651
Part-time workers.....	38,373	21,433	897	15,817	226
Operating and maintaining wells, total.....	85,431	85,163	.....	230	38
Full-time workers.....	68,237	68,065	.....	143	28
Part-time workers.....	17,194	17,097	.....	87	10
Drilling wells and rig building, total.....	51,157	22,268	.....	28,094	795
Full-time workers.....	36,075	18,438	.....	17,047	590
Part-time workers.....	15,082	3,830	.....	11,047	205
Doing other work, total.....	28,006	4,370	8,608	14,984	44
Full-time workers.....	21,909	3,864	7,711	10,301	33
Part-time workers.....	6,097	508	897	4,683	11
Average hourly earning of wage earners.....	\$0.82	\$0.82	\$0.79	\$0.85	\$0.89
Horsepower rating of prime movers and electric motors driven by purchased energy, total.....	5,285,666	3,386,341	772,302	1,096,361	10,642
Per wage earner.....	34.2	32.2	92.7	27.4	31.4
Prime movers.....	4,796,589	2,956,834	757,583	1,071,899	10,273
Electric motors driven by purchased energy.....	469,077	429,507	14,719	24,462	369
Horsepower rating of electric motors driven by energy generated by reporting companies.....	118,612	70,639	28,493	21,475	5
Fuels consumed:					
Anthracite (tons of 2,000 pounds).....	<sup>4</sup> 762	762	.....	(5)	.....
Bituminous coal (tons of 2,000 pounds).....	<sup>4</sup> 25,894	5,465	20,130	(5)	99
Fuel oils (barrels of 42 gallons).....	<sup>4</sup> 2,345,300	2,161,961	53,743	(5)	129,578
Gasoline and kerosene (gallons).....	<sup>4</sup> 17,969,421	17,659,972	38,699	(5)	270,750
Natural gas (thousands of cubic feet).....	<sup>4</sup> 462,331,466	284,343,025	177,769,765	(5)	218,678
Electric energy consumed (thousands of kw.-hrs.), total.....	<sup>4</sup> 837,506	671,057	165,975	(5)	474
Purchased.....	<sup>4</sup> 651,872	614,386	37,012	(5)	474
Generated by reporting companies.....	<sup>4</sup> 185,634	56,671	128,963	(5)	.....

<sup>1</sup>For explanations regarding operations included and terms used see footnotes to tables 8, 20, 23, and 52.

<sup>2</sup>Companies with more than 1 type of operation, or in more than 1 industry are counted only once in the totals.

<sup>3</sup>Schedules for natural-gasoline plants did not request value of residue gas marketed. The value of all gas produced and marketed (less transportation costs), including gas marketed after treatment at natural-gasoline plants, was reported on schedules for oil- and gas-well operations and included in figures for the crude-petroleum and natural-gas industry.

<sup>4</sup>Excludes statistics for oil- and gas-field services performed by contractors.

<sup>5</sup>Not available.

## MINERAL INDUSTRIES

TABLE 2.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS DRILLED IN THE UNITED STATES, CLASSIFIED BY SOURCE OF INFORMATION: 1939<sup>1</sup>

ITEM	TOTAL FOR ALL WELLS WITH COMPONENT COSTS PARTLY ESTIMATED <sup>2</sup>					AS REPORTED BY COMPANIES THAT DRILLED WELLS FOR THEIR OWN ACCOUNT OR FOR WHOM WELLS WERE DRILLED ON CONTRACT <sup>3</sup>
	All wells			Wells drilled on contract	All other wells	
	Total number, footage, or cost	Cost per well	Cost per foot			All wells
Number of wells drilled, total.....	22,580	.....	.....	14,085	8,475	22,560
Oil wells.....	17,263	.....	.....	11,004	6,259	17,263
Gas wells.....	1,594	.....	.....	984	630	1,594
Dry holes.....	3,703	.....	.....	2,117	1,586	3,703
Footage drilled, total.....	72,191,160	.....	.....	43,174,421	29,016,739	72,191,160
Oil wells.....	55,837,519	.....	.....	33,802,705	22,034,814	55,837,519
Gas wells.....	4,439,105	.....	.....	2,775,895	1,663,210	4,439,105
Dry holes.....	11,914,536	.....	.....	6,595,821	5,318,715	11,914,536
Average footage drilled per well, all wells.....	3,200	.....	.....	3,065	3,424	3,200
Oil wells.....	3,235	.....	.....	3,072	3,521	3,235
Gas wells.....	2,785	.....	.....	2,880	2,640	2,785
Dry holes.....	3,218	.....	.....	3,118	3,354	3,218
Costs designated below for drilling and equipping wells, total <sup>5</sup> .....	\$371,788,000	\$16,480	\$5.15	\$206,860,000	\$164,928,000	\$256,922,654
Oil wells.....	\$304,496,000	\$17,639	\$5.45	\$171,876,000	\$132,620,000	\$213,808,330
Gas wells.....	\$18,495,000	\$11,603	\$4.17	\$11,500,000	\$6,995,000	\$12,365,745
Dry holes.....	\$48,797,000	\$13,178	\$4.10	\$23,484,000	\$25,313,000	\$30,750,779
Cost of drilling, total <sup>6</sup> .....	\$242,989,000	\$10,770	\$3.37	\$133,586,000	\$109,383,000	\$131,718,421
Oil wells.....	\$185,849,000	\$10,766	\$3.33	\$104,496,000	\$81,353,000	\$98,228,035
Gas wells.....	\$12,161,000	\$7,629	\$2.74	\$7,408,000	\$4,753,000	\$6,343,959
Dry holes.....	\$44,959,000	\$12,141	\$3.77	\$21,682,000	\$23,277,000	\$27,146,427
Cost of equipping, total <sup>7</sup> .....	\$128,819,000	\$5,710	\$1.78	\$73,274,000	\$55,545,000	\$125,204,433
Oil wells.....	\$118,647,000	\$6,873	\$2.12	\$67,380,000	\$51,287,000	\$115,578,295
Gas wells.....	\$6,334,000	\$3,974	\$1.43	\$4,092,000	\$2,242,000	\$6,021,788
Dry holes.....	\$3,838,000	\$1,037	\$0.33	\$1,802,000	\$2,036,000	\$3,604,352
Casing, total.....	\$77,623,000	\$3,441	\$1.07	\$42,787,000	\$34,856,000	\$75,317,088
Oil wells.....	\$69,617,000	\$4,033	\$1.24	\$38,291,000	\$31,328,000	\$67,729,623
Gas wells.....	\$4,551,000	\$2,855	\$1.03	\$2,917,000	\$1,634,000	\$4,347,254
Dry holes.....	\$3,455,000	\$933	\$0.29	\$1,559,000	\$1,898,000	\$3,240,211
Equipping for flowing and pumping, total <sup>8</sup> .....	\$46,579,000	\$2,065	\$0.65	\$27,877,000	\$18,702,000	\$45,404,183
Oil wells.....	\$44,580,000	\$2,581	\$0.80	\$26,579,000	\$17,981,000	\$43,494,717
Gas wells.....	\$1,893,000	\$1,062	\$0.38	\$1,097,000	\$596,000	\$1,597,075
Dry holes.....	\$326,000	\$88	\$0.03	\$201,000	\$125,000	\$312,391
Production derricks, total <sup>9</sup> .....	\$4,617,000	\$204	\$0.06	\$2,630,000	\$1,987,000	\$4,483,162
Oil wells.....	\$4,470,000	\$259	\$0.08	\$2,510,000	\$1,960,000	\$4,353,955
Gas wells.....	\$90,000	\$57	\$0.02	\$78,000	\$12,000	\$77,457
Dry holes.....	\$57,000	\$18	\$0.01	\$42,000	\$15,000	\$51,750
Man-hours worked by wage earners in drilling wells and rig building..	<sup>10</sup> 75,727,000	.....	.....	(11)	(11)	<sup>12</sup> 31,919,340

<sup>1</sup> Statistics represent oil wells, gas wells, and dry holes drilled and completed in 1939, including those completed in 1939 although begun in 1938 and wells drilled and abandoned in 1939 before completion; the latter are included with statistics for dry holes. Concerns were not requested to report and the statistics presented do not include the number of wells drilled, footage drilled, or drilling costs for: (1) oil, gas, or dry wells that were only "spudded in," drilled deeper, or in process of drilling at the end of 1939; (2) water-intake wells (for water flooding to increase oil production or for water disposal); (3) gas- or air-intake wells (for repressuring); or (4) water-supply wells unless drilled and chargeable to oil- or gas-well drilling operations (except that concerns were requested to include the cost of such water wells in the cost of drilling the oil or gas wells but the number and footage of the water wells drilled were not called for). Statistics reported for wells drilled by small oil and gas companies and by small contractors are also excluded; these are shown in tables 24 and 49 of the present report.

Figures for columns headed "Wells drilled on contract" represent wells drilled on contract for reporting companies; those for columns headed "All other wells" represent wells drilled by reporting companies for their own account.

<sup>2</sup> The cost statistics in these columns give the approximate component costs of drilling and equipping all oil and gas wells and dry holes reported to the Census as drilled and completed in 1939 by the crude-petroleum and natural-gas industry. The statistics from the reports of oil and gas companies are combined with the statistics from the reports of contractors. Such a synthesis of statistics was necessary to present comparable component costs of drilling and equipping all wells because reports from oil and gas companies gave the cost breakdown only for the portion of the total cost borne directly by them, lumping the remainder in amounts paid or due contractors. Similarly, reports from contractors for wells drilled on contract gave the cost breakdown only for the portion of the cost borne by the contractors and covered by the amounts paid or due them for drilling and equipping wells. Since the reports received from contractors gave detailed costs of drilling and equipping wells for 92.8 percent of the total footage of wells drilled on contract as reported by the oil and gas companies, the cost figures reported by contractors were raised (for each kind of well separately) to represent 100 percent of the footage drilled on contract before the total and component costs were compiled. The \$8,625,752 paid or due contractors in connection with the drilling and equipping of wells drilled by the oil and gas companies for their own account (as shown in table 9) was distributed among the component costs in direct proportion to the cost breakdowns reported by contractors.

<sup>3</sup> Represents statistics for drilling activities of producing operations (as defined in table 7, footnote 1) and of nonproducing operations (as defined in table 7, footnote 3) in the crude-petroleum and natural-gas industry. Detailed statistics by States for these operations are shown in table 9.

<sup>4</sup> Detailed statistics by States for "Concerns that submitted complete separate reports for contract work" are shown in tables 22, 35, and 36 of the present report; statistics by States for "Concerns that did not submit complete separate reports for contract work" are shown in table 13.

<sup>5</sup> This total is smaller than the total cost of drilling and equipping wells as given in table 9. Amounts paid or due contractors were included in table 9 whereas this table (except for amounts paid by contractors to subcontractors and to contractors by oil and gas companies in connection with wells drilled by the latter for their own account) includes only the specified costs borne by contractors. Such expense items as taxes, interest, and insurance, as well as contractors' profits, are thus excluded.

TABLE 2.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS DRILLED IN THE UNITED STATES, CLASSIFIED BY SOURCE OF INFORMATION: 1939<sup>1</sup>—Continued

ITEM	AS REPORTED BY COMPANIES THAT DRILLED WELLS FOR THEIR OWN ACCOUNT OR FOR WHOM WELLS WERE DRILLED ON CONTRACT <sup>3</sup> —Continued		AS REPORTED BY CONTRACTORS FOR WELLS DRILLED ON CONTRACT FOR OTHER CONCERNS <sup>4</sup>		
	Wells drilled on contract	All other wells	Total	Concerns that submitted complete separate reports for contract work	Concerns that did not submit complete separate reports for contract work
Number of wells drilled, total.....	14,085	8,475	12,729	12,322	407
Oil wells.....	11,004	6,259	10,344	10,024	320
Gas wells.....	984	630	758	744	14
Dry holes.....	2,117	1,586	1,627	1,554	73
Footage drilled, total.....	43,174,421	29,016,739	40,083,482	38,897,768	1,185,714
Oil wells.....	33,802,705	22,034,814	32,785,927	31,839,609	946,318
Gas wells.....	2,775,895	1,663,210	2,155,210	2,134,910	20,300
Dry holes.....	6,595,821	5,318,715	5,142,345	4,923,249	219,096
Average footage drilled per well, all wells.....	3,085	3,424	3,149	3,157	2,913
Oil wells.....	3,072	3,521	3,170	3,176	2,957
Gas wells.....	2,880	2,640	2,843	2,870	1,450
Dry holes.....	3,116	3,354	3,181	3,168	3,001
Costs designated below for drilling and equipping wells, total <sup>5</sup> .....	\$100,620,380	\$156,302,474	\$98,751,586	\$98,342,859	\$2,408,727
Oil wells.....	\$88,094,005	\$125,712,325	\$81,261,607	\$79,406,518	\$1,855,289
Gas wells.....	\$5,878,760	\$6,688,985	\$4,519,641	\$4,466,789	\$52,852
Dry holes.....	\$6,847,615	\$23,903,164	\$12,970,338	\$12,469,552	\$500,586
Cost of drilling, total <sup>6</sup> .....	\$30,693,882	\$101,024,539	\$95,602,821	\$93,310,448	\$2,292,373
Oil wells.....	\$23,549,121	\$74,678,914	\$78,511,817	\$76,738,581	\$1,773,236
Gas wells.....	\$1,883,332	\$4,460,627	\$4,289,285	\$4,246,155	\$41,130
Dry holes.....	\$5,261,429	\$21,884,998	\$12,801,719	\$12,325,712	\$478,007
Cost of equipping, total <sup>7</sup> .....	\$69,926,498	\$55,277,935	\$3,148,765	\$3,032,411	\$116,354
Oil wells.....	\$64,544,884	\$51,033,411	\$2,749,790	\$2,667,737	\$82,053
Gas wells.....	\$3,795,428	\$2,226,358	\$230,356	\$219,634	\$11,722
Dry holes.....	\$1,586,186	\$2,018,166	\$168,619	\$146,040	\$22,579
Casing, total.....	\$40,632,087	\$34,685,001	\$1,995,430	\$1,919,180	\$76,250
Oil wells.....	\$38,547,569	\$31,182,054	\$1,890,716	\$1,845,929	\$44,787
Gas wells.....	\$2,723,948	\$1,623,308	\$149,775	\$140,891	\$8,884
Dry holes.....	\$1,360,570	\$1,879,641	\$154,939	\$132,560	\$22,579
Equipping for flowing and pumping, total <sup>8</sup> .....	\$26,788,988	\$18,615,195	\$1,035,704	\$995,900	\$39,804
Oil wells.....	\$26,594,847	\$17,899,870	\$955,008	\$918,042	\$36,986
Gas wells.....	\$1,005,687	\$691,408	\$71,081	\$68,243	\$2,838
Dry holes.....	\$188,474	\$123,917	\$9,615	\$9,615	.....
Production derricks, total <sup>9</sup> .....	\$2,505,423	\$1,977,739	\$117,631	\$117,331	\$300
Oil wells.....	\$2,402,468	\$1,951,487	\$104,066	\$103,788	\$300
Gas wells.....	\$65,813	\$11,644	\$9,500	\$9,500	.....
Dry holes.....	\$37,142	\$14,608	\$4,065	\$4,065	.....
Man-hours worked by wage earners in drilling wells and rig building..	(11)	(11)	(11)	13 40,809,461	(14)

<sup>6</sup> Includes cost of labor, supplies, fuel, power, and charges for the use of machinery and tools used in such operations as: Moving onto location all equipment and supplies; excavating for derrick foundations; building derrick foundations; digging slush pits; erecting derricks; building loading or pipe racks; laying fuel and water lines; rigging up; drilling holes; making straight-hole tests and surveys; coring; testing formation; mud conditioning; reaming; running casing, screens, and liners; cleaning out; bailing; swabbing; fishing for tools or equipment; repairing and maintaining rigs and derricks; tearing down rigs; dismantling derricks and racks; and moving equipment off location. Concerns were requested to include in the cost of drilling the cost (including freight and express charges thereon) of all supplies used in the above operations, such as: Drilling muds, weighting materials, and mud chemicals; lumber or timber for making forms, mud boxes, and pipe racks and for constructing derricks, etc.; cement, sand, and gravel; rig-operating supplies such as oils, grease, packing, rope, and firebrick; drilling bits, reamers, and core heads; hand tools; iron and steel for derrick and for blacksmithing; cordage and wire lines; water, if purchased, or cost of water well chargeable to oil- or gas-well drilling operations.

<sup>7</sup> Concerns were requested to include the cost of delivering and installing equipment but not to duplicate costs reported under "Cost of drilling." They were also requested to deduct the value of equipment, such as casing, that was salvaged after use, but to include the cost of salvaging.

<sup>8</sup> Includes cost of all well equipment necessary for production (except casing and production derricks) such as tubing, packers, flow lines, flow tanks, oil and gas separators, and such wellhead fittings as Christmas trees and connections, tubing heads, chokes, gauges, and anchor clamps.

<sup>9</sup> Includes cost of drilling derricks, or any portions thereof, retained over wells for production (concerns were requested not to include this cost under "Cost of drilling"), or cost of special production derricks erected after drilling derricks were dismantled.

<sup>10</sup> Represents the sum of the man-hours reported by oil and gas companies and contractors and man-hours estimated for contractors that did not report. An estimate for the latter, of 2,998,000 man-hours, was obtained by multiplying the footage drilled on contract and not accounted for by contractors' reports (3,090,939 feet) by the average of 0.97 man-hour worked per foot drilled by contractors that furnished complete separate reports (see table 15).

<sup>11</sup> Separate statistics not available.

<sup>12</sup> Includes man-hours for the wells shown in the last column, "Concerns that did not submit complete separate reports for contract work."

<sup>13</sup> Represents man-hours devoted to drilling wells and rig building reported by contractors that reported the detailed costs shown above and also man-hours for such work reported by all other oil- and gas-field contractors that submitted complete separate reports.

<sup>14</sup> Included in figures shown in the sixth column; see footnote 12.



TABLE 3.—PRINCIPAL STATISTICS FOR THE CRUDE-PETROLEUM AND NATURAL-GAS AND THE NATURAL-GASOLINE INDUSTRIES IN THE UNITED STATES: 1939, 1919, 1909, 1902, 1889, AND 1880<sup>1</sup>

[For producing operations only]

ITEM	1939	1919	1909	1902	1889	1880 <sup>2</sup>
Number of operating companies <sup>3</sup> .....	7,866	( <sup>4</sup> )	7,793	2,546	( <sup>4</sup> )	( <sup>4</sup> )
Number of oil and gas wells producing, December 31.....	<sup>5</sup> 347,645	257,673	166,320	123,200	37,410	<sup>6</sup> 15,009
Number of natural-gasoline plants.....	734	1,115	9	.....	.....	.....
Quantity of products: <sup>7</sup>						
Crude petroleum (barrels).....	1,228,133,816	350,112,253	171,559,394	89,275,302	35,183,513	26,286,123
Natural gas (thousands of cubic feet) <sup>8</sup> .....	2,929,184,828	727,295,000	431,852,530	205,784,453	552,150,000	( <sup>4</sup> )
Natural gasoline (gallons) <sup>9</sup> .....	2,177,845,508	454,089,466	271,000	.....	.....	.....
Value of products, total <sup>7</sup> .....	\$1,472,291,339	\$902,979,752	\$175,527,607	<sup>10</sup> \$102,265,602	<sup>10</sup> \$38,008,198	<sup>10</sup> \$24,600,638
Crude petroleum.....	\$1,251,904,685	\$694,026,948	\$117,696,529	\$71,397,739	\$28,983,340	\$24,600,638
Marketed natural gas <sup>11</sup> .....	\$115,349,685	\$127,086,381	\$57,716,520	\$30,867,663	\$11,044,858	( <sup>4</sup> )
Natural gasoline <sup>9</sup> .....	\$58,922,393	\$78,760,835	\$29,000	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
Other products and services rendered.....	\$18,114,616	\$5,095,608	\$5,758	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
Number of persons engaged, total.....	151,939	125,110	59,085	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
Wage earners (average for the year, including inactive periods).....	113,498	93,205	36,744	<sup>12</sup> 22,230	<sup>13</sup> 26,911	<sup>14</sup> 11,477
Salaried employees.....	32,327	17,682	6,128	4,956	2,312	( <sup>15</sup> )
Proprietors and firm members (not applicable to corporations).....	6,114	14,223	16,213	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
Performing manual labor.....	1,306	1,987	2,155	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>4</sup> )
Principal expenses designated below, total.....	\$571,802,997	\$452,506,043	\$92,461,649	\$82,780,144	<sup>10</sup> \$32,973,721	<sup>10</sup> \$14,083,160
Wages.....	\$188,382,732	\$134,521,247	\$27,091,650	\$16,178,640	\$8,747,972	<sup>14</sup> \$7,179,000
Salaries.....	\$33,844,270	\$33,468,366	\$7,241,881	\$4,797,105	\$1,535,317	( <sup>14</sup> )
Supplies and materials.....	\$68,690,393	\$195,058,698	\$59,947,013	\$24,388,787	<sup>16</sup> \$22,690,432	<sup>15</sup> \$3,174,160
Fuel <sup>15</sup> .....	\$28,059,971	\$19,828,776	<sup>17</sup> \$1,444,595	\$17,415,632	( <sup>4</sup> )	( <sup>4</sup> )
Purchased electric energy.....	\$7,093,569	<sup>18</sup> \$935,300	\$16,738,510	( <sup>16</sup> )	( <sup>16</sup> )	<sup>19</sup> \$3,730,000
Contract work.....	\$199,732,062	\$68,663,659	( <sup>17</sup> )	( <sup>16</sup> )	( <sup>16</sup> )	( <sup>16</sup> )
Horsepower rating of prime movers and elec- tric motors driven by purchased energy, total.....	4,158,643	1,821,342	1,221,969	1,014,184	( <sup>4</sup> )	( <sup>4</sup> )
Per wage earner.....	36.8	19.5	33.3	45.6	( <sup>4</sup> )	( <sup>4</sup> )
Prime movers.....	3,714,417	1,770,181	1,221,809	1,011,694	( <sup>4</sup> )	( <sup>4</sup> )
Electric motors driven by purchased energy..	444,226	<sup>20</sup> 51,161	180	212,490	( <sup>4</sup> )	( <sup>4</sup> )
Horsepower rating of electric motors driven by energy generated by reporting companies....	97,132	28,164	8,589	75	( <sup>4</sup> )	( <sup>4</sup> )

<sup>1</sup> Statistics cover oil- and gas-field activities and natural-gasoline plant operations of concerns that produced crude petroleum, natural gas, or natural gasoline during the year. The figures for 1939 include concerns whose combined total value of products and services rendered, or whose reported principal expenses, or cost of buildings, machinery, and equipment, or cost of drilling and equipping oil wells, gas wells, and dry holes amounted to \$2,500 or more. Figures for smaller operations in these industries are given only in tables 20, 21, and 66. These statistics also exclude oil- and gas-field contract work performed by concerns which furnished separate reports covering such activities.

Figures for 1919 are for "enterprises" producing crude petroleum, natural gas, or natural gasoline whose total value of products was \$500 or more. No minimum was placed on the size of operations included for 1909, 1902, 1889, and 1880.

Figures for output of crude petroleum and natural gas and number of oil wells as reported by producers to the Bureau of the Census are lower than those published by the United States Bureau of Mines for 1939 and by the United States Geological Survey for 1919 which are based essentially on reports from companies operating gathering lines and from gas-distributing companies. The output of crude petroleum in 1939 and 1919 as reported by producers to the Bureau of the Census represented 97.2 percent and 92.5 percent, respectively, of the total published for those years by the Bureau of Mines and the Geological Survey.

<sup>2</sup> Statistics for 1880 exclude natural-gas well operations. Although natural gas was being used widely in 1880 it still was of relatively little commercial importance.

<sup>3</sup> For 1939 and 1909 companies that submitted more than 1 report are counted only once in the totals. In the figure for 1902 only one operator was counted for all operations of the Standard Oil Company.

<sup>4</sup> Not available.

<sup>5</sup> Includes wells temporarily idle because of proration restrictions but excludes other shut-in wells.

<sup>6</sup> Represents number of oil wells producing, May 31, 1880.

<sup>7</sup> Statistics represent the entire output of wells and natural-gasoline plants, including royalty interests and products used for fuel and power at the producing operations. Value figures represent values at the wells or plants where the products were produced.

<sup>8</sup> Statistics represent both casinghead gas (from wells that also produced oil) and "dry" gas (from wells that did not produce oil). In 1939, concerns were requested to report "marketed production" and their "best estimate" of "all other production." It is believed that some natural gas wasted at wells was not regarded as "production" by some respondents and hence was not reported. The figure for 1919 and earlier years represents the sum of gas sold and gas used by producers and excludes gas wasted at well locations and also excludes 233,800,000 M cubic feet for 1919 and 127,947,980 M cubic feet for 1909 of gas purchased by the industry and duplicated in the production shown in earlier census reports.

<sup>9</sup> Represents natural gasoline recovered at natural-gasoline plants and "drip" gasoline recovered at oil-and-gas-well operations.

<sup>10</sup> Excludes statistics for items for which information was not available as indicated by footnotes.

<sup>11</sup> The figure for 1919 and earlier years includes, whereas the figure for 1939 excludes, the value of gas used by producers in oil- and gas-well and natural-gasoline plant operations. The figures for 1919 and 1909 exclude \$28,813,671 and \$9,888,677, respectively, representing the cost of gas purchased and duplicated in the value of products shown in earlier census reports.

<sup>12</sup> 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 product reported." "In editing the schedules . . . the figures for average number of employees were reduced to a 300-day basis whenever the schedule showed them to be the average 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."

<sup>13</sup> The 1889 census schedules called for "average number employed," presumably an average for active periods.

<sup>14</sup> Number and compensation of overseers is included, at least in part, with the figures for wage earners.

<sup>15</sup> Represents in addition to the cost of purchased fuels, the value of fuels produced and consumed by the reporting companies.

<sup>16</sup> For 1889 the figure for supplies and materials includes part, but probably not all, of the amounts paid for contract work.

<sup>17</sup> Represents cost of drive-pipe, casing, tubing, and torpedoes.

<sup>18</sup> Includes amounts paid for purchased power other than electric energy.

<sup>19</sup> Represents "cost of drilling wells."

<sup>20</sup> Includes 6,523 horsepower for equipment operated by purchased power other than electric energy.

<sup>21</sup> Includes 2,140 horsepower for equipment operated by purchased power other than electric energy.

TABLE 4.—SUMMARY FOR THE CRUDE-PETROLEUM AND NATURAL-GAS AND THE NATURAL-GASOLINE INDUSTRIES IN THE UNITED STATES, BY STATE: 1939 AND 1919<sup>1</sup>

[For producing operations only]

STATE AND CENSUS YEAR	Number of wells producing on December 31	Number of natural-gasoline plants	PRODUCTION OF—		Value of all products	NUMBER OF PERSONS ENGAGED				
			Crude petroleum (barrels)	Natural gasoline (gallons) <sup>2</sup>		Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members	
									Total	Performing manual labor
United States:										
1939.....	347,645	734	1,228,133,816	2,177,845,508	\$1,472,291,339	<sup>3</sup> 151,839	113,498	<sup>3</sup> 32,327	6,114	1,306
1919.....	257,673	1,115	350,112,253	454,089,466	902,979,752	125,110	93,205	17,682	14,223	1,987
Arkansas:										
1939.....	2,987	9	20,914,947	24,843,130	17,959,849	2,092	1,811	192	89	26
1919.....	124	.....	.....	.....	456,048	40	18	24	.....	.....
California:										
1939.....	16,657	96	223,904,320	613,104,330	286,557,288	21,977	16,613	4,958	406	117
1919.....	9,197	58	97,711,350	43,036,745	138,508,590	14,317	12,344	1,842	131	22
Colorado and New Mexico:										
1939 <sup>4</sup> .....	3,204	<sup>4</sup> 6	38,950,887	54,509,501	35,226,947	2,202	1,688	432	82	21
1919.....	71	.....	115,565	.....	153,594	101	80	13	8	2
Illinois:										
1939.....	16,981	53	93,593,753	4,133,227	96,905,564	6,726	5,398	1,112	216	25
1919.....	16,498	72	11,621,992	8,044,198	31,171,904	3,506	2,752	305	449	2
Indiana:										
1939.....	1,885	.....	1,644,555	380	1,694,195	600	418	147	35	9
1919.....	2,456	.....	795,076	1,800	2,553,849	644	403	118	123	25
Kansas:										
1939.....	20,236	18	57,324,967	63,061,553	65,159,145	7,933	6,373	1,154	406	83
1919.....	12,690	11	26,526,169	5,482,698	68,227,433	8,131	6,305	1,187	639	32
Kentucky <sup>5</sup>										
1939.....	9,668	6	4,206,549	7,782,708	10,094,159	1,663	1,439	154	40	7
1919.....	5,214	7	7,926,199	3,627,941	23,288,417	2,634	2,119	456	59	9
Louisiana:										
1939.....	6,529	29	92,056,755	97,530,997	110,145,748	10,108	8,267	1,638	203	38
1919.....	2,479	20	15,833,986	9,392,110	31,275,563	5,669	4,841	770	58	2
Montana:										
1939 <sup>4</sup> .....	2,067	( <sup>4</sup> )	5,843,735	.....	6,838,876	938	630	208	100	38
1919.....	28	.....	90,193	.....	258,046	48	38	10	.....	.....
New York:										
1939 <sup>4</sup> .....	14,729	( <sup>4</sup> )	3,898,376	.....	12,083,589	1,955	1,258	303	294	69
1919 <sup>6</sup> .....	14,186	6	846,860	1,435,996	7,208,808	2,014	868	336	810	173
Ohio:										
1939.....	15,011	12	2,030,418	7,478,702	9,789,544	2,689	1,767	723	199	81
1919.....	35,440	53	6,910,588	8,987,950	42,390,958	9,072	5,123	1,361	2,588	163
Oklahoma:										
1939.....	50,384	139	153,144,020	428,811,200	181,095,081	25,173	18,144	6,306	723	136
1919 <sup>6</sup> .....	44,735	311	81,492,433	273,078,962	237,739,377	26,378	21,180	4,218	980	24
Pennsylvania:										
1939.....	65,484	107	14,059,808	12,585,565	45,686,568	8,632	6,442	1,398	792	251
1919 <sup>6</sup> .....	77,325	319	6,680,350	25,877,951	61,194,846	17,255	9,065	1,642	6,548	1,429
Texas:										
1939.....	89,568	169	467,582,948	768,479,986	520,450,910	46,687	33,589	11,242	1,856	271
1919 <sup>6</sup> .....	8,749	23	72,971,644	10,446,432	142,976,725	17,904	13,599	3,652	453	47
West Virginia:										
1939.....	26,137	78	3,251,055	58,561,414	26,415,710	7,312	6,064	826	422	104
1919.....	27,363	230	7,900,323	56,534,510	93,646,807	15,032	12,302	1,354	1,376	57
Wyoming:										
1939.....	2,673	7	22,269,068	30,708,160	22,443,674	1,559	1,196	354	9	1
1919.....	1,084	5	12,674,670	8,342,173	21,685,656	2,358	2,187	191	.....	.....
Michigan, Mississippi, Missouri, South Dakota, Tennessee, Utah, and Washington:										
1939 <sup>4</sup> .....	3,243	<sup>4</sup> 5	23,455,855	6,276,655	23,744,710	3,641	2,251	1,148	242	27
1919 <sup>7</sup> .....	34	.....	14,855	.....	43,131	7	3	3	1	.....

<sup>1</sup> For explanations of extent of comparability of statistics for 1939 and 1919 see footnotes to table 3.<sup>2</sup> Represents natural gasoline produced at natural-gasoline plants and "drip" gasoline produced in connection with oil- and gas-well operations.<sup>3</sup> Includes statistics for central-office employees in Florida, Iowa, Maryland, Minnesota, Nebraska, New Jersey, Oregon, and Rhode Island.<sup>4</sup> Statistics for 2 natural-gasoline plants in Colorado, 1 in Montana, and 1 in New York have been included with those for 1 natural-gasoline plant in Michigan to avoid disclosure of confidential information.

## MINERAL INDUSTRIES

TABLE 4.—SUMMARY FOR THE CRUDE-PETROLEUM AND NATURAL-GAS AND THE NATURAL-GASOLINE INDUSTRIES IN THE UNITED STATES, BY STATE: 1939 AND 1919<sup>1</sup>—Continued

[For producing operations only]

STATE AND CENSUS YEAR	PRINCIPAL EXPENSES							Horsepower rating of power equipment
	Total	Wages	Salaries	Supplies and materials	Fuel	Purchased electric energy	Contract work	
United States:								
1939.....	\$571,802,997	\$168,382,732	\$83,844,270	\$88,890,393	\$28,059,971	\$7,093,569	\$199,732,062	4,158,843
1919.....	452,508,043	134,521,247	33,468,368	195,058,693	19,828,776	965,300	68,663,659	1,821,342
Arkansas:								
1939.....	10,705,873	2,800,008	484,119	1,807,912	586,709	81,695	4,945,430	71,864
1919.....	223,490	26,583	29,420	75,691	9,816	.....	82,000	617
California:								
1939.....	87,963,197	30,031,639	13,690,246	16,769,621	5,057,362	2,583,600	19,830,729	893,067
1919.....	57,119,874	22,387,544	3,773,648	25,385,588	3,931,081	683,249	998,766	220,089
Colorado and New Mexico:								
1939 <sup>4</sup> .....	13,968,878	2,860,969	1,092,631	1,737,777	506,835	20,694	7,747,972	49,854
1919.....	317,636	141,986	22,378	126,414	20,369	4,489	.....	1,713
Illinois:								
1939.....	36,515,432	6,113,147	2,342,241	3,634,814	493,079	148,903	21,783,248	100,174
1919.....	6,225,886	3,277,515	742,468	1,692,172	151,570	3,079	359,082	35,430
Indiana:								
1939.....	1,999,888	465,426	349,552	143,707	46,469	3,474	991,280	8,817
1919.....	1,189,538	475,788	162,693	271,975	61,296	4,248	213,538	7,669
Kansas:								
1939.....	28,326,028	8,223,499	2,630,005	3,743,471	890,934	563,904	12,274,215	284,690
1919.....	49,079,552	9,615,375	2,198,748	30,046,473	3,269,151	61,983	3,687,822	95,883
Kentucky:								
1939.....	3,424,712	1,331,454	338,260	699,261	169,807	1,226	884,684	25,087
1919.....	10,624,807	2,645,512	826,340	4,006,774	233,411	.....	2,912,770	15,795
Louisiana:								
1939.....	58,564,694	13,416,844	4,381,942	9,411,436	2,819,604	240,586	26,324,302	244,961
1919.....	19,590,402	7,055,514	1,441,479	7,652,554	1,427,665	824	2,032,088	79,249
Montana:								
1939 <sup>4</sup> .....	2,122,621	904,356	298,155	354,369	131,659	15,918	418,164	20,242
1919.....	133,170	58,057	14,560	45,492	14,999	.....	2,272	245
New York:								
1939 <sup>4</sup> .....	4,869,688	1,722,486	892,331	538,367	425,687	19,767	1,271,050	32,627
1919 <sup>5</sup> .....	3,561,186	1,067,232	449,568	1,215,807	191,476	.....	617,083	30,196
Ohio:								
1939.....	5,289,077	2,084,343	1,445,294	497,220	347,659	248	894,313	63,475
1919.....	17,919,051	6,343,279	2,104,518	5,197,502	848,211	11,683	3,412,458	153,220
Oklahoma:								
1939.....	73,946,479	25,448,603	17,000,608	12,782,775	4,005,368	1,142,165	13,556,940	657,968
1919 <sup>6</sup> .....	112,311,306	30,749,438	10,765,467	49,598,967	2,373,833	107,765	18,695,638	353,234
Pennsylvania:								
1939.....	19,749,880	8,222,124	3,584,897	2,030,087	1,864,264	196,306	3,872,202	175,827
1919 <sup>6</sup> .....	28,807,466	10,219,433	2,513,949	8,962,963	1,566,224	21,825	5,523,072	371,287
Texas:								
1939.....	195,586,234	50,885,406	30,333,649	29,053,518	6,987,465	1,881,488	76,464,708	1,110,811
1919 <sup>6</sup> .....	102,997,814	24,569,129	5,454,590	42,780,088	4,372,195	55,655	25,766,157	107,549
West Virginia:								
1939.....	13,312,896	6,925,208	1,588,853	1,785,583	1,014,216	20,906	1,978,130	122,279
1919.....	33,756,531	12,416,434	2,514,025	14,227,852	1,083,710	30,400	3,484,110	338,194
Wyoming:								
1939.....	6,748,869	2,038,184	731,351	553,472	168,574	138,432	3,118,876	45,693
1919.....	8,624,905	3,486,735	430,697	3,757,754	273,094	.....	676,625	12,893
Michigan, Mississippi, Missouri, South Dakota, Tennessee, Utah, and Washington:								
1939 <sup>4</sup> .....	10,652,686	2,908,036	2,632,493	1,136,983	564,060	34,277	3,375,839	51,707
1919 <sup>7</sup> .....	24,429	5,713	3,600	14,629	487	.....	.....	99

<sup>5</sup> Statistics for Pennsylvania include figures for small operations in New York, inseparably combined in the report for an enterprise which conducted the major portion of its operations in Pennsylvania.

<sup>6</sup> Statistics for Oklahoma include figures for small operations in Texas, inseparably combined in the report for an enterprise which conducted the major portion of its operations in Oklahoma.

<sup>7</sup> For 1919, no producing operations were reported in Mississippi, Missouri, or Washington.

TABLE 5.—NUMBER AND HORSEPOWER RATING OF PRIME MOVERS AND ELECTRIC MOTORS IN THE CRUDE-PETROLEUM AND NATURAL-GAS AND THE NATURAL-GASOLINE INDUSTRIES IN THE UNITED STATES, BY STATE: 1939 AND 1919<sup>1</sup>

[For producing operations only]

STATE AND CENSUS YEAR	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY <sup>2</sup>				ELECTRIC MOTORS DRIVEN BY ENERGY GENERATED BY REPORTING COMPANIES		
	Aggregate horsepower	Prime movers		Electric motors driven by purchased energy <sup>2</sup>		Number	Horsepower
		Number	Horsepower	Number	Horsepower		
United States:							
1939.....	4,158,643	82,282	3,714,417	22,967	444,226	5,561	97,132
1919.....	1,821,342	77,111	1,770,181	21,841	251,161	1,329	28,164
Arkansas:							
1939.....	71,864	1,735	68,951	86	2,913	10	246
1919.....	617	7	617	.....	.....	1	12
California:							
1939.....	893,067	10,505	687,181	10,292	205,886	196	2,897
1919.....	220,089	5,950	186,294	21,318	233,795	350	7,462
Colorado and New Mexico:							
1939.....	49,854	1,033	49,449	42	405	101	1,748
1919.....	1,713	127	1,583	15	130	.....	.....
Illinois:							
1939.....	100,174	2,994	93,520	1,427	6,654	603	2,774
1919.....	35,430	1,893	35,328	26	2104	2	25
Indiana:							
1939.....	8,317	300	7,941	5	376	.....	.....
1919.....	7,669	339	7,548	19	123	.....	.....
Kansas:							
1939.....	284,690	7,140	247,462	1,671	37,228	298	6,535
1919.....	95,883	3,539	91,971	163	3,912	249	7,440
Kentucky:							
1939.....	25,067	1,002	25,003	6	64	.....	.....
1919.....	13,795	810	13,795	.....	.....	1	1
Louisiana:							
1939.....	244,961	3,822	232,758	470	12,203	109	3,692
1919.....	79,249	2,858	79,215	2	34	25	310
Montana:							
1939 <sup>3</sup> .....	20,242	521	19,404	81	838	4	38
1919.....	245	9	245	.....	.....	.....	.....
New York:							
1939 <sup>3</sup> .....	32,627	1,233	31,372	115	1,255	22	551
1919 <sup>4</sup> .....	30,196	2,161	30,196	.....	.....	4	10
Ohio:							
1939.....	63,475	2,836	63,471	5	4	2	1
1919.....	153,220	7,306	153,083	11	137	2	37
Oklahoma:							
1939.....	857,988	15,141	822,891	1111	35,097	1,704	36,689
1919 <sup>5</sup> .....	353,234	11,537	349,243	2139	25,991	41	394
Pennsylvania:							
1939.....	175,827	7,213	166,231	699	9,596	454	2,476
1919 <sup>4</sup> .....	371,287	22,421	365,082	241	26,185	203	2,341
Texas:							
1939.....	1,110,811	19,527	998,893	5,100	113,918	1,774	36,901
1919 <sup>5</sup> .....	107,549	3,908	106,174	64	1,375	95	2,442
West Virginia:							
1939.....	122,279	4,869	118,796	358	3,483	106	1,234
1919.....	336,194	13,799	336,819	61	1,375	365	7,615
Wyoming:							
1939.....	45,693	518	33,870	1,297	11,823	77	754
1919.....	12,893	440	12,893	.....	.....	1	75
Michigan, Mississippi, Missouri, South Dakota, Tennessee, Utah, and Washington:							
1939.....	51,707	1,893	49,224	204	2,483	101	596
1919 <sup>6</sup> .....	99	7	99	.....	.....	.....	.....

<sup>1</sup> For explanations of extent of comparability of statistics for 1939 and 1919 see footnotes to table 3.

<sup>2</sup> Statistics for 1919 include the horsepower, but not the number of units, of equipment operated by purchased power other than electric. The total horsepower of such equipment was 6,523, with 45 in California, 30 in Illinois, 900 in Oklahoma, and 5,548 in Pennsylvania.

<sup>3</sup> Statistics for 2 natural-gasoline plants in Colorado, 1 in Montana, and 1 in New York have been included with those for 1 natural-gasoline plant in Michigan to avoid disclosure of confidential information.

<sup>4</sup> Statistics for Pennsylvania include figures for small operations in New York, inseparably combined in the report for an enterprise which conducted the major portion of its operations in Pennsylvania.

<sup>5</sup> Statistics for Oklahoma include figures for small operations in Texas, inseparably combined in the report for an enterprise which conducted the major portion of its operations in Oklahoma.

<sup>6</sup> For 1919, no producing operations were reported in Mississippi, Missouri, or Washington.

## MINERAL INDUSTRIES

TABLE 6.—QUANTITY OF FUELS CONSUMED BY THE CRUDE-PETROLEUM AND NATURAL-GAS AND THE NATURAL-GASOLINE INDUSTRIES IN THE UNITED STATES, BY STATE: 1939 AND 1919<sup>1</sup>

[For producing operations only]

STATE AND CENSUS YEAR	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)
United States:					
1939.....	762	25,595	2,215,724	17,898,871	462,112,790
1919.....	.....	67,216	5,898,610	1,917,468	99,997,358
Arkansas:					
1939.....	.....	.....	7,614	89,464	9,341,979
1919.....	.....	.....	.....	.....	52,080
California:					
1939.....	2	.....	658,165	3,774,482	79,629,337
1919.....	.....	.....	2,124,490	18,564	19,981,454
Colorado and New Mexico:					
1939 <sup>2</sup> .....	.....	.....	96,129	289,913	24,696,541
1919.....	.....	2,059	1,739	1,260	6,820
Illinois:					
1939.....	86	1,977	73,010	1,670,180	4,578,077
1919.....	.....	3,385	6,777	66,402	1,809,962
Indiana:					
1939.....	200	444	12,556	99,669	283,473
1919.....	.....	7,799	678	6,300	329,788
Kansas:					
1939.....	.....	147	60,289	1,255,869	10,419,759
1919.....	.....	5,470	672,021	137,298	7,769,509
Kentucky:					
1939.....	.....	186	1,611	125,998	991,841
1919.....	.....	8,406	37,639	396,354	751,455
Louisiana:					
1939.....	.....	.....	740,687	965,913	45,587,573
1919.....	.....	.....	415,002	18,690	13,546,954
Montana:					
1939 <sup>2</sup> .....	245	98	3,518	121,263	1,397,767
1919.....	.....	197	.....	.....	671,621
New York:					
1939 <sup>2</sup> .....	2	239	10,629	217,946	1,586,920
1919 <sup>3</sup> .....	.....	1,243	.....	42	1,097,257
Ohio:					
1939.....	15	114	350	305,520	1,768,244
1919.....	.....	7,365	1,130	30,660	5,435,516
Oklahoma:					
1939.....	.....	1,083	66,183	1,387,290	72,643,528
1919 <sup>4</sup> .....	.....	7,209	186,922	728,112	15,134,427
Pennsylvania:					
1939.....	4	1,182	16,727	410,740	6,597,135
1919 <sup>5</sup> .....	.....	6,602	168	102,774	9,488,464
Texas:					
1939.....	45	.....	355,695	6,143,912	189,730,479
1919 <sup>4</sup> .....	.....	8,089	2,332,649	400,134	10,265,933
West Virginia:					
1939.....	.....	19,883	1,303	150,369	6,001,596
1919.....	.....	7,500	185	4,536	11,860,929
Wyoming:					
1939.....	.....	.....	44,703	93,847	2,959,045
1919.....	.....	1,892	119,310	6,342	1,743,724
Michigan, Mississippi, Missouri, South Dakota, Tennessee, Utah, and Washington:					
1939 <sup>2</sup> .....	161	242	64,555	596,296	3,899,496
1919 <sup>5</sup> .....	.....	.....	.....	.....	1,675

<sup>1</sup> For explanations of extent of comparability of statistics for 1939 and 1919, see footnotes to table 3. In addition to the fuels specified, the industries reported that 2,852 cords of wood were consumed in 1919. Statistics for quantities of fuels not specified are not available for 1939. All figures include in addition to purchased fuels, those produced and consumed by the reporting companies. Figures for "Fuel oils" include crude petroleum; those for "Gasoline and kerosene" include natural gasoline and liquefied petroleum gases.

<sup>2</sup> Statistics for 2 natural-gasoline plants in Colorado, 1 in Montana, and 1 in New York have been included with those for 1 natural gasoline plant in Michigan to avoid disclosure of confidential information.

<sup>3</sup> Statistics for Pennsylvania include figures for small operations in New York, inseparably combined in the report for an enterprise which conducted the major portion of its operations in Pennsylvania.

<sup>4</sup> Statistics for Oklahoma include figures for small operations in Texas, inseparably combined in the report for an enterprise which conducted the major portion of its operations in Oklahoma.

<sup>5</sup> For 1919, no producing operations were reported in Mississippi, Missouri, or Washington.

## Crude Petroleum and Natural Gas

In 1939, a year comparatively free from the effects of depression or war, the oil wells of the country accounted for about three-fifths of the estimated world production of crude petroleum and produced more than enough for domestic requirements. Crude petroleum and natural gas produced in the United States rank second only to coal as a source of energy. For some purposes, such as driving internal-combustion engines, this industry provides the only suitable source of energy.

The crude-petroleum and natural-gas industry in 1939 had products valued at \$1,375,954,000 at wells and engaged a total of 141,592 persons.<sup>1</sup>

The value of the industry's products exceeded that of any other mineral industry and accounted for 43 percent of the total for all mineral industries. A total of 198,878 persons were engaged in oil- and gas-field activities in 1939, including--in addition to the 141,592 persons engaged in the production of crude petroleum and natural gas--46,939 engaged in performing oil- and gas-field contract services and 10,347 in natural-gasoline production. Persons engaged in the maintenance and operation of pipe lines and petroleum refineries are not included.

The production of crude petroleum and natural gas was reported by 7,782 companies that at the end of 1939 operated 300,179 oil wells and 47,466 gas wells located in 24 States.\* These wells produced 1,228,134,000 barrels of crude petroleum and 2,287,413,000 thousand cubic feet of marketed natural gas. Operators of oil and gas wells also did a large part of the oil- and gas-field development work, drilling (for their own account) about 40 percent of the footage of oil and gas wells and dry holes completed during the year; the remainder was drilled by contractors.

### PRINCIPAL EXPENSES

The crude-petroleum and natural-gas industry paid \$155,170,000 in wages in 1939 to an average of 105,166 wage earners. Salaried employees, of whom there were 30,322 in October of the year, were paid \$78,792,000. Expenditures for supplies and materials amounted to \$78,037,000; for purchased electric energy, \$6,739,000; for fuel, \$19,460,000; and for work done on contract by other concerns, \$195,748,000. These reported principal expenses totaled \$533,947,000. In addition to the above general items of expense, the 1939 census collected for the first time comprehensive data on capital outlays during the year for buildings, machinery, and equipment, and on costs of drilling and equipping wells.

<sup>1</sup>Statistics are not included for extremely small operations; these are defined as operations of concerns producing crude petroleum or natural gas whose reports covering the production of crude petroleum, natural gas, and natural gasoline and oil- and gas-field development work (when combined for all States) indicated that neither total value of products and services rendered, nor reported principal expenses, nor cost of buildings, machinery, and equipment during the year, nor cost of drilling and equipping wells amounted to as much as \$2,500. Such small producing operations for which reports were received engaged 3,421 persons; statistics reported for these small operations are shown only in tables 20 and 21. Statistics for oil- and gas-field operations in States in which the reporting concerns had no products are also excluded. Nonproducing operations that were large enough to come within the scope of the census engaged 753 persons; statistics for such operations are shown separately in tables 7 and 19 and are included with other statistics in tables 2, 8, and 9. Unless stated otherwise (as in the section on "Drilling Operations"), the figures presented in the following discussion exclude figures for non-producing operations and for the small producing operations mentioned above.

\*Every effort was made to cover all companies that operated oil or gas wells or that drilled oil or gas wells or dry holes during 1939. Published and unpublished records and files of the various Federal, State, and private agencies were carefully examined; numerous directories, trade journals, and records of drilling permits were consulted; and special field agents were employed to find new or unlisted concerns. Although complete coverage was sought, it is apparent a few of the smaller concerns were not canvassed. The output of crude petroleum reported by producers to the Bureau of the Census (including the production of small operators shown in table 14) represented 97.2 percent of the total quantity as published by the United States Bureau of Mines; the figures of the Bureau of Mines are based largely on pipe-line runs reported by companies operating gathering lines and supplemented by data on changes in crude-oil stocks and consumption at wells during the year as reported by producers.

The total cost of new buildings, major alterations of existing structures, and machinery and equipment installed by the industry during the year was \$198,166,000. Of this amount, \$188,578,000 represented expenditures for machinery and equipment (94 percent of it for new machinery and equipment) and \$9,588,000 for buildings. These expenses include installation costs which are partly duplicated in the other expenditures given above.

### PRODUCTION AND NUMBER OF WELLS

Of the total value of products of 1-1/3 billion dollars reported by the crude-petroleum and natural-gas industry in 1939, 91.0 percent represented the value of crude petroleum; 8.4 percent, the value of marketed natural gas; 0.1 percent, the value of "drip" gasoline and other miscellaneous products; and 0.5 percent, the amount received or due for services performed, principally drilling and operating oil and gas wells, for other concerns.

The 1939 production of 1,228,134,000 barrels of crude petroleum was 3-1/2 times the 350,112,000 barrels reported for 1919. Thirty-one of the 7,782 producing companies reported 684,488,000 barrels of crude oil, or approximately 56 percent of the total output of the United States; 110 companies, each of which produced 1,000,000 barrels or more, accounted for more than two-thirds of the total.

Crude oil was produced in 22 States in 1939, with 6 States accounting for 88 percent of the total output of the country. Operations in Texas accounted for 38 percent; in California, 18 percent; Oklahoma, 12 percent; Illinois, 8 percent; Louisiana, 7 percent; and Kansas, 5 percent. Although the same 6 States also accounted for 88 percent of the total output in 1919, their relative importance was different. Of the total output in that year, operations in California produced 28 percent; those in Oklahoma, 23 percent; Texas, 21 percent; Kansas, 8 percent; Louisiana, 5 percent; and Illinois, 3 percent.

The crude petroleum produced in 1939 was valued at \$1,251,905,000 at wells--an average of \$1.02 per barrel. The average value per barrel ranged from \$0.79 in Arkansas to \$2.08 in New York; the average values for the 6 largest producing States, however, did not vary from the average for the United States by more than 2 cents.

The total output of natural gas reported in 1939, including marketed and all other production, amounted to 2,929,185,000 thousand cubic feet. Slightly over half of this gross production was casinghead gas--gas from wells that yielded both oil and gas; the remainder was "dry" gas--gas from wells that produced only gas.\* A total of 2,287,413,000 thousand cubic feet of gas was produced and marketed in 1939; the total value of the marketed gas at wells was \$115,350,000--an average of 5.0 cents per thousand cubic feet. Marketed "dry" gas was valued at \$79,694,000, or 6.4 cents per thousand cubic feet, and marketed casinghead gas at \$35,656,000, or 3.4 cents per thousand cubic feet.

Natural gas was produced in 24 States in 1939, with 7 States accounting for approximately 88 percent of the gross production. Operations in Texas produced 40 percent of the total; those in California, 13 percent; Louisiana, 13 percent; Oklahoma, 10 percent; West Virginia, 5 percent; New Mexico, 4 percent; and Pennsylvania, 3 percent. In 1919 West Virginia, with 30 percent of the total, was the principal natural-gas

\*The quantity of the gross production should be regarded as approximate. Producers were requested to report "marketed production" of natural gas and their "best estimate" of "all other production" of gas. It is believed likely that some of the natural gas wasted at wells was not regarded as "production" by some respondents and hence was not reported.

producing State; Oklahoma was second with 21 percent; Pennsylvania and New York accounted for 17 percent; Ohio, 9 percent; Louisiana, 7 percent; and California, 6 percent.

At the end of 1939 the industry had 300,179 producing oil wells (including wells temporarily idle because of proration restrictions) and 47,466 producing gas wells. Companies were requested to classify wells producing both oil and gas according to their more valuable product. In addition, 12,834 oil wells and 4,850 gas wells at producing and nonproducing operations were reported "shut in" (or idle) and 23,688 wells were reported used for repressuring or flooding for the purpose of increasing production of oil or gas. The latter were located principally in Pennsylvania, New York, and Oklahoma.

#### DRILLING OPERATIONS

##### Number and footage of wells drilled

A total of 22,560 wells was reported drilled and completed at producing and nonproducing operations in the United States in 1939, including 17,263 oil wells, 1,594 gas wells, and 3,703 dry holes.\* The total footage of wells drilled amounted to 72,191,000. Fifty-eight percent of the total number of wells and 69 percent of the aggregate footage were drilled in California, Illinois, Louisiana and Mississippi, and Texas. Drilling operations in Texas alone accounted for 35 percent of the wells and 43 percent of the footage. For the United States as a whole, 5.8 new oil wells were drilled during the year for each 100 oil wells producing at the end of the year. This ratio was greatly exceeded, however, in such important producing States as Illinois (16.4), Indiana (10.6), Louisiana and Mississippi (15.4), New Mexico (18.0), and Texas (7.4).

The depth of new oil and gas wells and dry holes drilled in 1939 averaged 3,200 feet. The average ranged from less than 2,000 feet in Indiana, Kentucky and Tennessee, Michigan, Missouri and Nebraska, New York, and Pennsylvania to over 5,500 feet in Arkansas, California, and Louisiana and Mississippi. The average depth of all new oil wells drilled in the United States was 3,235 feet; of gas wells, 2,785 feet; and of dry holes, 3,218 feet.

About 60 percent of the total footage was drilled on contract for oil and gas companies; the remainder was drilled by oil and gas companies for their own account. The average footage per well drilled on contract was 3,065, and that of wells drilled by the oil and gas companies for their own account, 3,424.

##### Cost of drilling and equipping wells

The total cost reported by oil and gas companies for drilling and equipping the 22,560 oil and gas wells and dry holes completed in 1939 aggregated \$404,904,000. This amount includes \$256,923,000 expended directly by oil and gas companies and \$147,981,000 paid or due contractors for drilling and equipping wells. Of the cost borne directly by oil and gas companies, \$131,718,000 represents the cost of drilling wells and includes expenditures for labor, supplies, fuel, and power, and rental or depreciation charges for the use of machinery and tools. The remaining \$125,204,000 represents the cost of equipping wells and includes \$75,317,000 for casing, \$45,404,000 for equipment for flowing and pumping, and \$4,483,000 for production derricks. The companies were requested to include the cost of delivering and installing the equipment and to deduct the value of equipment such as casing that may have been salvaged after use.

The cost to oil and gas companies of drilling and equipping wells, including amounts paid or due contractors, averaged \$17,948 per well or \$5.61 per foot drilled. The cost per foot averaged \$5.92 for oil wells, \$4.71 for gas wells, and \$4.48 for dry holes. The average cost per foot for all wells ranged from \$1.83 in Missouri and Nebraska, and \$1.88 in New York and Pennsylvania to \$11.90 in California and \$12.72 in Wyoming and Colorado. The average was \$5.37 for Illinois, \$8.18 for Louisiana and Mississippi, and \$4.83 for Texas. In individual

cases costs as high as \$28.00 per foot were reported. Generally, the higher costs per foot were reported for the deeper wells. Thus costs per foot in New York and Pennsylvania where depths averaged 1,604 and 1,758 feet, respectively, were lower than in California, where the average depth was 5,578 feet.

Although 60 percent of the total footage of wells drilled and completed in 1939 was reported "drilled on contract," only about 37 percent of the total cost to oil and gas companies for drilling and equipping wells represented amounts paid or due contractors; the remainder represented cost borne directly by the oil and gas companies. Oil and gas companies usually furnished the equipment for the wells drilled. Payments to contractors constituted more than half of the total cost for drilling and equipping wells in Arkansas, Illinois, Missouri and Nebraska, New York, Pennsylvania, and Wyoming and Colorado; such payments represented only 19 percent of the total cost in California and 27 percent in Montana.\*

Reports from oil and gas companies gave details for only that part of the total cost borne directly by oil and gas companies (about 63 percent). These detailed costs, combined with those reported by contractors, and supplemented by cost estimates for footage drilled on contract and not covered by reports from contractors,<sup>6</sup> indicate the approximate component costs of drilling and equipping all wells. Such summary figures, covering the same items of expense whether borne by oil and gas companies or by contractors,<sup>7</sup> are presented in the next paragraph.

The total cost of drilling and equipping all oil and gas wells and dry holes drilled in the United States in 1939 amounted to approximately \$371,788,000—about \$16,480 per well and \$5.15 per foot. The total drilling cost amounted to about \$242,969,000, or \$10,770 per well and \$3.37 per foot. About one man-hour of manual labor was required, on the average, to drill each foot of well. The total cost of equipping wells amounted to approximately \$128,819,000—\$8,873 per oil well, \$3,974 per gas well, and \$1,037 per dry hole (chiefly for casing). The total cost of casing, amounting to about \$77,623,000, accounted for 60 percent of the total cost of equipping wells. The cost of flowing and pumping equipment for all new wells drilled was \$46,579,000; and the cost of production derricks, \$4,617,000.

#### EMPLOYMENT AND WORKING TIME

Although the value of products of the crude-petroleum and natural-gas industry represented 43 percent of the total value of products for all mineral industries, the industry accounted for only 17 percent of the total number of persons engaged. Of the 105,166 wage earners employed at producing operations in the industry in 1939, four-fifths were full-time workers.\* In addition, 30,322 salaried employees and 6,104 proprietors and firm members were reported for October. Of the latter, 1,304 were reported performing manual labor. Between 1919 and 1939 the value of products of crude-petroleum, natural-gas, and natural-gasoline operations increased about 63 percent while the number of persons engaged rose 21 percent.

Employment in the crude-petroleum and natural-gas industry, unlike that in coal mining, fluctuated very little from month to month and reached a peak in summer when employment in the coal industry is at a minimum. The peak of 107,259 wage earners in the crude-petroleum and natural-gas industry, reached in July, was 2 percent above the average for the year. In contrast with this, the peak employment of wage earners in

\*Since payments to contractors for drilling and equipping wells cover more items of expense (such as taxes, interest, and insurance) than are included in the reported costs borne directly by the oil and gas companies, and since they also include the contractors' profits, part of the differences among States in the reported costs to oil and gas companies per foot of wells drilled is accounted for by the differences in proportion of the total reported cost represented by amounts paid or due contractors.

<sup>6</sup>Detailed cost reports were received from contractors for 92.8 percent of the total footage of wells drilled on contract as reported by oil and gas companies for which the wells were drilled. For the method used in estimating costs for the remaining 7.2 percent of the footage drilled see table 2, footnote 2.

<sup>7</sup>For details of items of expense included see table 2, footnotes 5, 6, 7, 8, and 9.

\*These figures do not include wells drilled by concerns too small to come within the scope of the census; such small concerns from which reports were obtained drilled 225 wells, including 91 oil wells, 42 gas wells, and 92 dry holes. (See table 21.)

<sup>8</sup>Concerns were requested to report as part-time wage earners all those who worked substantially fewer hours per week than the number of hours in the full-time work-week. Since some of the part-time workers are believed to have been on the pay rolls of more than one company and thus were reported more than once, the total number reported may be higher than the number of individuals actually employed.



the bituminous-coal industry, for example, was reached in November and was 22 percent above the average for the year.

Wage earners in the industry, excluding employees of contractors rendering oil- and gas-field services, worked a total of 190,078,000 man-hours; 80 percent of these man-hours was devoted to operating and maintaining wells and 20 percent to drilling wells, rigbuilding, and other work. The wage earners were paid an average of 82 cents per man-hour. Those employed by concerns engaged only in operating and maintaining wells received an average of 69 cents; those employed by concerns engaged in drilling as well as operating and maintaining wells averaged 84 cents. Wage earners at operations in Texas averaged 84 cents; in California, 98 cents; in Oklahoma, 78 cents; in Illinois, 77 cents; and in Louisiana, 85 cents. These figures for hourly earnings are approximate averages for all wage earners and should not be interpreted as hourly wage rates. The latter apply to specific occupations (such as pumper, gauger, roustabout, drilling derrickman, and rotary driller) and frequently take into account special conditions of work.

#### POWER EQUIPMENT AND ENERGY CONSUMED

The aggregate rating of power equipment in use or available for use by producing operations in the crude-petroleum and natural-gas industry at the end of 1939 was 3,386,000 horsepower—more than that of any other mineral industry. Contractors performing oil- and gas-field services reported additional power equipment with a total horsepower rating of 1,096,000. The large amount of power consumed in the oil and gas fields is used principally for pumping and drilling purposes. Eighty-seven percent of the aggregate horsepower reported by the crude-petroleum and natural-gas industry represented prime movers, and 13 percent, electric motors driven by purchased energy. Electric motors run by energy generated by the reporting companies were rated at 70,639 horsepower.

Fuel consumed by the crude-petroleum and natural-gas industry in 1939 included 284,343,000 thousand cubic feet of natural gas, 2,162,000 barrels of fuel oil, 17,660,000 gallons

of gasoline and kerosene, 5,465 tons of bituminous coal, and 782 tons of anthracite. The value of all fuels was \$19,460,000, and the quantities of natural gas, fuel oil, and gasoline and kerosene consumed were larger than those reported by any other mineral industry. Consumption of electric energy totaled 671,057,000 kilowatt-hours, of which 614,386,000 kilowatt-hours were purchased at a cost of \$6,739,000, and the remainder was generated by the reporting companies.

#### CLASSIFICATION BY TYPE OF OPERATION

Each concern canvassed in the census survey was requested to submit separate reports for each State in which it operated or drilled wells in 1939, showing its oil-well activities in one report and its gas-well activities in another and to classify each well producing both oil and gas according to its more valuable product. Reports from concerns large enough to come within the scope of the census, after excluding reports for operations without products, were then divided into two classes: Those for operations that included drilling (either by their own organizations or by contractors) in addition to the operation of producing wells, and those for producing operations only. The reports in each of these two groups were further classified into those reporting (1) oil-well operations only, (2) oil- and gas-well operations, and (3) gas-well operations only. Principal statistics for these types of producing operations and for nonproducing operations are presented in table 7.

Reports for producing operations were received from 7,782 companies; separate reports covering oil-well operations were received from 5,842 companies, and accounted for 64 percent of the total output of crude petroleum and 61 percent of the total output of casinghead gas. Separate reports for producing gas-well operations were received from 1,053 companies; these reports accounted for 85 percent of the total production of "dry" gas. Producing operations that did not include drilling were reported by 4,454 companies. Reports for producing operations that included drilling were submitted by 3,358 companies; these reports accounted for 87 percent of the total value of the industry's products.

## MINERAL INDUSTRIES

TABLE 7.—PRINCIPAL STATISTICS FOR THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY TYPE OF OPERATION: 1939<sup>1</sup>

ITEM	Producing and nonproducing operations	PRODUCING OPERATIONS <sup>2</sup>					
		All producing operations				Operating, maintaining, and drilling wells	
		Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Total	Oil-well operations only
Number of operating companies <sup>4</sup> .....	8,061	7,782	5,842	1,254	1,053	3,358	2,184
Number of wells producing, December 31, 1939, total.....	347,845	347,845	198,623	105,568	43,454	252,586	125,844
Oil wells.....	300,179	300,179	198,623	101,556	.....	217,407	125,844
Gas wells.....	47,466	47,466	.....	4,012	43,454	35,179	.....
Quantity of products:							
Crude petroleum (barrels).....	1,228,133,816	1,228,133,816	762,076,824	445,847,078	209,914	1,063,986,033	630,775,202
Natural gas (thousands of cubic feet), total.....	2,928,184,828	2,928,184,828	914,333,639	758,535,032	1,258,316,157	2,450,370,390	745,620,783
Marketed.....	2,287,413,256	2,287,413,256	615,733,193	564,448,605	1,107,231,458	1,875,218,923	490,433,859
All other production.....	641,771,572	641,771,572	296,800,446	192,088,427	151,084,699	575,151,467	255,186,924
Casinghead gas, total.....	1,504,626,430	1,504,626,430	914,333,639	545,314,097	44,978,694	1,297,090,963	745,620,783
Marketed.....	1,050,015,973	1,050,015,973	615,733,193	390,246,384	44,036,396	889,916,019	490,433,859
All other production.....	454,610,457	454,610,457	298,600,446	155,067,713	942,298	407,174,944	255,186,924
"Dry" gas, total.....	1,424,558,398	1,424,558,398	.....	211,220,935	1,213,337,463	1,153,279,427	.....
Marketed.....	1,237,397,283	1,237,397,283	.....	174,202,221	1,063,195,062	985,302,904	.....
All other production.....	187,161,115	187,161,115	.....	37,018,714	150,142,401	167,976,523	.....
"Drip" gasoline (gallons).....	36,066,703	36,066,703	9,752,574	155,537	26,158,592	30,984,957	5,849,170
Value of products, total.....	\$1,375,953,576	\$1,375,953,576	\$828,760,307	\$467,451,689	\$79,741,580	\$1,192,593,411	\$674,949,148
Crude petroleum.....	\$1,251,904,665	\$1,251,904,665	\$800,757,811	\$450,904,057	\$242,797	\$1,090,248,507	\$652,211,904
Marketed natural gas.....	\$115,349,665	\$115,349,665	\$21,891,295	\$14,832,150	\$78,626,250	\$94,971,393	\$17,763,618
"Drip" gasoline.....	\$1,179,545	\$1,179,545	\$434,738	\$5,925	\$738,882	\$970,935	\$261,426
Other products.....	\$251,350	\$251,350	\$116,653	\$133,918	\$779	\$215,634	\$66,061
Amount received or due for services performed for others <sup>5</sup> .....	\$7,268,351	\$7,268,351	\$5,559,840	\$1,575,639	\$132,872	\$6,186,942	\$4,626,139
Number of persons engaged, total.....	142,345	141,592	81,789	48,864	10,939	112,092	58,010
Wage earners (average for the year, including inactive periods).....	105,505	105,166	61,076	36,214	7,876	84,688	44,215
Salaried employees.....	30,546	30,322	15,867	12,051	2,404	24,860	11,895
Proprietors and firm members (not applicable to corporations).....	6,294	6,104	4,846	599	659	2,544	1,900
Performing manual labor.....	1,346	1,304	863	216	225	610	338
Principal expenses designated below, total.....	\$538,864,036	\$533,947,385	\$310,066,133	\$197,705,231	\$26,176,021	\$480,957,631	\$266,065,316
Wages.....	\$155,699,591	\$155,170,484	\$87,677,136	\$56,271,435	\$9,221,913	\$132,342,041	\$68,730,468
Salaries.....	\$79,199,314	\$78,792,331	\$41,801,901	\$32,275,481	\$4,714,949	\$66,958,274	\$32,959,862
Supplies and materials.....	\$78,537,990	\$78,037,445	\$47,741,514	\$28,137,879	\$2,158,052	\$67,327,325	\$38,279,257
Fuel.....	\$19,646,751	\$19,459,824	\$11,163,292	\$7,239,597	\$1,036,935	\$18,557,483	\$8,621,011
Purchased electric energy.....	\$6,746,015	\$6,738,867	\$4,784,225	\$1,966,246	\$8,396	\$5,492,137	\$3,571,113
Contract work.....	\$199,034,385	\$195,748,434	\$116,898,065	\$69,814,593	\$9,035,778	\$192,282,371	\$113,903,605
Cost of buildings, machinery, and equipment erected or installed during year, total.....	\$199,167,496	\$198,165,564	\$127,277,441	\$63,771,383	\$7,116,740	\$192,674,208	\$122,793,814
Buildings.....	\$9,757,343	\$9,588,049	\$5,432,677	\$3,950,991	\$204,381	\$9,115,498	\$5,131,978
Machinery and equipment, total.....	\$189,410,153	\$188,577,515	\$121,844,764	\$59,820,392	\$6,912,359	\$183,558,710	\$117,661,836
Purchased in new condition.....	\$177,848,691	\$177,097,893	\$114,098,975	\$56,512,254	\$6,488,684	\$173,275,071	\$110,760,978
Purchased in used condition.....	\$11,561,462	\$11,479,622	\$7,747,789	\$3,308,138	\$423,695	\$10,283,639	\$6,900,858
Number of wells drilled and completed in 1939, total <sup>7</sup> .....	22,580	22,126	15,013	5,382	1,731	22,126	15,013
Oil wells.....	17,283	17,235	12,690	4,345	.....	17,235	12,690
Gas wells.....	1,594	1,588	.....	226	1,342	1,568	.....
Dry holes.....	3,703	3,323	2,123	811	389	3,323	2,123
Drilled on contract for reporting companies, total.....	14,085	13,783	9,541	3,178	1,064	13,783	9,541
Oil wells.....	11,004	10,985	8,371	2,614	.....	10,985	8,371
Gas wells.....	964	949	.....	125	.....	949	.....
Dry holes.....	2,117	1,849	1,170	439	824	1,849	1,170
Drilled by reporting companies for own account, total.....	8,475	8,343	5,472	2,204	667	8,343	5,472
Oil wells.....	6,259	6,250	4,519	1,731	.....	6,250	4,519
Gas wells.....	630	619	.....	101	518	619	.....
Dry holes.....	1,586	1,474	953	372	149	1,474	953
Footage of wells drilled and completed in 1939, total.....	72,191,160	70,994,466	44,849,360	21,609,005	4,536,101	70,994,466	44,849,360
Drilled on contract for reporting companies.....	43,174,421	42,350,177	28,586,133	12,806,462	2,957,582	42,350,177	28,586,133
Drilled by reporting companies for own account.....	29,016,739	28,644,289	18,263,227	8,802,543	1,578,519	28,644,289	18,263,227
Footage of wells drilled by reporting companies for other concerns <sup>8</sup> .....	1,185,714	1,185,714	901,569	284,145	.....	1,185,714	901,569
Cost of drilling and equipping wells completed in 1939 <sup>9</sup> .....	\$404,903,532	\$400,285,017	\$248,100,625	\$134,863,344	\$17,321,048	\$400,285,017	\$248,100,625

<sup>1</sup> Statistics exclude natural-gasoline plant operations included in table 8 but otherwise conform to the definition of the industry given in table 3, footnote 1; for explanation of terms used see appropriate footnotes to table 3. Each concern was requested to submit separate reports for each State in which it operated or drilled wells in 1939, covering its oil-well activities in one report and its gas-well activities in another and classifying each well in producing both oil and gas according to its more valuable product. The statistics from reports for producing operations that included any drilling of new or old wells (whether by the reporting company or on contract for the reporting company) are presented in the columns headed "operating, maintaining, and drilling wells"; those from reports for producing operations that did not include drilling are presented in the columns headed "operating and maintaining wells only." Statistics from reports covering only oil-well operating (or oil-well operating and drilling) activities are presented in the columns headed "oil-well operations only." Statistics for "gas-well operations only" are similarly segregated. Some concerns engaged in both oil- and gas-well activities in the same State did not submit separate reports by type of operation; statistics from such combined reports are presented in the columns headed "oil- and gas-well operations."

<sup>2</sup> Statistics for producing operations by States are presented in table 10.

<sup>3</sup> Statistics represent oil- and gas-field operations in States in which the reporting concerns had no products provided the concerns were large enough to come within the scope of the census as defined in table 3, footnote 1. Statistics are also included for 2 large natural-gasoline plants in Texas that were under construction or undergoing major alteration during the year and had no products. Statistics for nonproducing operations by States are presented in table 19.

TABLE 7.—PRINCIPAL STATISTICS FOR THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY TYPE OF OPERATION: 1939<sup>1</sup>—Continued

ITEM	PRODUCING OPERATIONS <sup>2</sup> —Continued						Non-producing operations <sup>3</sup>
	Operating, maintaining, and drilling wells—con.		Operating and maintaining wells only				
	Oil- and gas-well operations	Gas-well operations only	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	
Number of operating companies <sup>4</sup> .....	1,022	368	4,454	3,825	249	728	307
Number of wells producing, December 31, 1939, total.....	94,496	32,246	95,059	72,779	11,072	11,208	.....
Oil wells.....	91,563	.....	82,772	72,779	9,993	.....	.....
Gas wells.....	2,933	32,246	12,287	.....	1,079	11,208	.....
Quantity of products:							
Crude petroleum (barrels).....	433,120,099	90,732	164,147,763	151,301,622	12,726,979	119,182	.....
Natural gas (thousands of cubic feet), total.....	706,156,117	998,591,490	478,814,438	168,712,856	50,376,915	259,724,667	.....
Marketed.....	520,034,854	864,750,210	412,194,333	125,299,334	44,413,751	242,481,248	.....
All other production.....	186,123,263	133,841,280	66,620,105	43,417,522	5,963,184	17,243,419	.....
Casinghead gas, total.....	528,065,207	23,404,973	207,535,467	168,712,856	17,248,890	21,573,721	.....
Marketed.....	376,238,765	23,243,395	160,099,954	125,299,334	14,007,619	20,793,001	.....
All other production.....	151,826,442	161,578	47,435,513	43,413,522	3,241,271	780,720	.....
"Dry" gas, total.....	178,092,910	975,186,517	271,278,971	.....	33,128,025	238,150,946	.....
Marketed.....	143,796,089	841,506,815	252,094,379	.....	30,406,132	221,688,247	.....
All other production.....	34,296,821	133,679,702	19,184,592	.....	2,721,893	16,462,699	.....
"Drip" gasoline (gallons).....	137,157	24,998,630	5,081,748	3,903,404	18,380	1,159,982	.....
Value of products, total.....	\$452,931,698	\$64,712,565	\$183,360,165	\$153,811,159	\$14,519,991	\$15,029,015	.....
Crude petroleum.....	\$437,934,268	\$102,335	\$161,656,158	\$148,545,907	\$12,969,789	\$140,462	.....
Marketed natural gas.....	\$13,368,624	\$63,819,151	\$20,378,272	\$4,127,647	\$1,443,526	\$14,807,099	.....
"Drip" gasoline.....	\$5,264	\$704,245	\$208,610	\$173,312	\$661	\$34,637	.....
Other products.....	\$128,806	\$767	\$35,716	\$30,592	\$5,112	\$12	.....
Amount received or due for services performed for others <sup>6</sup> .....	\$1,474,736	\$88,067	\$1,061,409	\$933,701	\$100,903	\$46,805	.....
Number of persons engaged, total.....	45,900	8,182	29,500	23,779	2,964	2,757	753
Wage earners (average for the year, including inactive periods).....	34,254	6,219	20,478	16,861	1,960	1,857	339
Salaried employees.....	11,220	1,745	5,462	3,972	831	659	224
Proprietors and firm members (not applicable to corporations).....	428	218	3,560	2,946	173	441	190
Performing manual labor.....	176	96	694	525	40	129	42
Principal expenses designated below, total.....	\$191,917,067	\$22,975,248	\$52,989,754	\$44,000,817	\$5,788,164	\$3,200,773	\$4,916,651
Wages.....	\$55,953,730	\$7,657,843	\$22,828,443	\$18,948,688	\$2,517,705	\$1,564,070	\$529,107
Salaries.....	\$30,290,005	\$3,708,407	\$11,836,057	\$8,642,039	\$1,985,476	\$1,008,542	\$406,983
Supplies and materials.....	\$27,270,111	\$1,777,967	\$10,710,120	\$9,462,257	\$887,768	\$380,095	\$500,535
Fuel.....	\$8,999,587	\$936,905	\$2,902,341	\$2,562,281	\$240,030	\$100,030	\$186,927
Purchased electric energy.....	\$1,913,632	\$7,392	\$1,246,730	\$1,193,112	\$52,614	\$1,004	\$7,148
Contract work.....	\$69,490,022	\$8,888,744	\$3,466,083	\$2,994,460	\$324,571	\$147,032	\$3,265,951
Cost of buildings, machinery, and equipment erected or installed during year, total.....	\$63,364,913	\$6,515,481	\$5,491,356	\$4,483,627	\$406,470	\$601,259	\$1,001,932
Buildings.....	\$3,835,225	\$148,295	\$472,551	\$300,699	\$115,766	\$56,086	\$169,294
Machinery and equipment, total.....	\$59,529,688	\$6,367,186	\$5,018,805	\$4,182,928	\$290,704	\$545,173	\$832,638
Purchased in new condition.....	\$56,346,880	\$6,167,213	\$3,822,822	\$3,335,997	\$165,374	\$321,451	\$750,798
Purchased in used condition.....	\$3,182,808	\$199,973	\$1,195,983	\$848,931	\$125,330	\$223,722	\$81,840
Number of wells drilled and completed in 1939, total <sup>7</sup> .....	5,382	1,731	.....	.....	.....	.....	434
Oil wells.....	4,345	.....	.....	.....	.....	.....	28
Gas wells.....	226	1,342	.....	.....	.....	.....	26
Dry holes.....	811	389	.....	.....	.....	.....	380
Drilled on contract for reporting companies, total.....	3,178	1,064	.....	.....	.....	.....	302
Oil wells.....	2,614	.....	.....	.....	.....	.....	19
Gas wells.....	125	824	.....	.....	.....	.....	15
Dry holes.....	439	240	.....	.....	.....	.....	268
Drilled by reporting companies for own account, total.....	2,204	667	.....	.....	.....	.....	132
Oil wells.....	1,731	.....	.....	.....	.....	.....	9
Gas wells.....	101	518	.....	.....	.....	.....	11
Dry holes.....	372	149	.....	.....	.....	.....	112
Footage of wells drilled and completed in 1939, total.....	21,809,005	4,536,101	.....	.....	.....	.....	1,196,694
Drilled on contract for reporting companies.....	12,806,462	2,957,582	.....	.....	.....	.....	824,244
Drilled by reporting companies for own account.....	8,802,543	1,578,519	.....	.....	.....	.....	372,450
Footage of wells drilled by reporting companies for other concerns <sup>8</sup> .....	284,145	.....	.....	.....	.....	.....	.....
Cost of drilling and equipping wells completed in 1939 <sup>9</sup> .....	\$134,863,344	\$17,321,048	.....	.....	.....	.....	\$4,618,515

<sup>4</sup>Companies classified under more than one type of operation are counted only once in the totals.<sup>5</sup>Represents \$172,923 for steam sold, \$51,777 for water sold, \$11,806 for electric energy sold, and \$15,044 for other and unspecified products.<sup>6</sup>For detailed statistics on major types of work performed and amount received or due for each type, see table 12.<sup>7</sup>Statistics include wells completed during 1939 although begun in the preceding year, but exclude wells not completed at the end of 1939.<sup>8</sup>For details on the number, footage, and cost of drilling and equipping these wells see table 13.<sup>9</sup>Represents cost borne by reporting companies for drilling and completing wells for their own account and amount paid contractors for drilling and completing wells. For details of these costs see tables 2 and 9.

TABLE 7.—PRINCIPAL STATISTICS FOR THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY TYPE OF OPERATION: 1939<sup>1</sup>—Continued

ITEM	Producing and non-producing operations	PRODUCING OPERATIONS <sup>2</sup>					
		All producing operations				Operating, maintaining, and drilling wells	
		Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Total	Oil-well operations only
Number of man-hours worked by wage earners, total.....	190,873,915	190,078,212	108,344,489	68,542,478	13,191,245	157,037,213	81,093,140
Operating and maintaining wells.....	151,307,518	151,283,141	85,600,725	54,282,135	11,400,281	118,789,788	58,769,138
Drilling wells and rig building <sup>10</sup> .....	31,919,340	31,897,839	19,609,658	10,170,028	1,608,153	31,387,839	19,609,658
Per foot drilled by reporting companies <sup>11</sup> .....	1.06	1.05	1.02	1.12	1.02	1.05	1.02
Doing other work <sup>10</sup> .....	7,447,059	7,407,232	3,134,106	4,090,315	182,811	6,859,586	2,714,346
Average number of wage earners on active days, total <sup>12</sup> .....	112,678	111,801	68,744	36,680	8,377	90,435	49,135
Full-time workers.....	81,019	80,568	51,321	33,508	5,541	77,001	40,313
Part-time workers.....	21,659	21,433	15,423	3,174	2,836	13,434	8,822
Operating and maintaining wells, total.....	85,201	85,163	49,883	28,665	3,815	64,315	32,463
Full-time workers.....	68,094	68,086	37,510	28,075	4,481	55,012	28,744
Part-time workers.....	17,107	17,097	12,173	2,590	2,334	9,303	5,719
Drilling wells and rig building, total.....	23,083	22,288	15,058	5,814	1,396	22,288	15,058
Full-time workers.....	19,028	18,438	12,198	5,282	958	18,438	12,198
Part-time workers.....	4,055	3,830	2,860	532	438	3,830	2,860
Doing other work, total.....	4,414	4,370	2,003	2,201	166	3,852	1,614
Full-time workers.....	3,897	3,864	1,813	2,149	102	3,551	1,371
Part-time workers.....	517	506	390	52	64	301	243
Average hourly earning of wage earners <sup>13</sup> .....	\$0.82	\$0.82	\$0.81	\$0.85	\$0.70	\$0.84	\$0.85
Horsepower rating of prime movers and electric motors driven by purchased energy, total.....	3,396,983	3,386,341	2,161,827	1,143,737	80,777	2,785,886	1,636,427
Per wage earner <sup>14</sup> .....	32.2	32.2	35.4	31.6	10.3	32.9	37.0
Prime movers.....	2,987,107	2,956,834	1,850,957	1,025,974	79,903	2,425,498	1,392,824
Electric motors driven by purchased energy.....	429,876	429,507	310,870	117,763	874	360,388	243,603
Horsepower rating of electric motors driven by energy generated by reporting companies.....	70,644	70,639	45,694	24,717	228	68,445	43,713
Electric energy consumed (thousands of kw.-hrs.), total.....	871,531	871,057	465,472	204,385	1,200	573,358	371,336
Purchased.....	814,880	814,386	434,034	179,413	939	520,599	343,487
Generated by reporting companies.....	56,671	56,671	31,438	24,972	261	52,759	27,849
Fuels consumed:							
Anthracite (tons of 2,000 pounds).....	762	782	669	90	3	382	377
Bituminous coal (tons of 2,000 pounds).....	5,584	5,465	2,438	1,768	1,259	4,896	2,007
Fuel oil (barrels of 42 gallons).....	2,291,557	2,181,981	1,297,665	851,730	12,586	1,814,995	983,529
Gasoline and kerosene (gallons).....	17,930,722	17,659,972	11,934,264	5,185,770	539,938	14,784,647	9,430,018
Natural gas (thousands of cubic feet).....	284,561,701	284,343,025	176,489,450	100,378,905	7,474,670	244,573,289	140,984,654

ITEM	PRODUCING OPERATIONS <sup>2</sup> —Continued						Non-producing operations <sup>3</sup>
	Operating, maintaining, and drilling wells—con.		Operating and maintaining wells only				
	Oil- and gas-well operations	Gas-well operations only	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	
Number of man-hours worked by wage earners, total.....	65,120,778	10,823,295	33,040,999	27,251,349	3,421,700	2,367,950	595,703
Operating and maintaining wells.....	50,956,182	9,064,470	32,493,353	26,631,589	3,325,953	2,335,811	24,375
Drilling wells and rig building <sup>10</sup> .....	10,170,028	1,608,153	.....	.....	.....	.....	531,501
Per foot drilled by reporting companies <sup>11</sup> .....	1.12	1.02	.....	.....	.....	.....	1.43
Doing other work <sup>10</sup> .....	3,994,568	150,672	547,646	419,760	95,747	32,139	39,827
Average number of wage earners on active days, total <sup>12</sup> .....	34,658	6,642	21,366	17,609	2,022	1,735	877
Full-time workers.....	32,029	4,659	13,367	11,008	1,477	882	651
Part-time workers.....	2,629	1,983	7,999	6,601	545	853	226
Operating and maintaining wells, total.....	28,710	5,142	20,848	17,220	1,955	1,673	38
Full-time workers.....	24,853	3,615	13,054	10,766	1,422	866	28
Part-time workers.....	2,057	1,527	7,794	6,454	533	807	10
Drilling wells and rig building, total.....	5,814	1,396	.....	.....	.....	.....	795
Full-time workers.....	5,282	958	.....	.....	.....	.....	590
Part-time workers.....	532	438	.....	.....	.....	.....	205
Doing other work, total.....	2,134	104	518	389	67	62	44
Full-time workers.....	2,094	86	313	242	55	16	33
Part-time workers.....	40	18	205	147	12	46	11
Average hourly earning of wage earners <sup>13</sup> .....	\$0.86	\$0.71	\$0.69	\$0.70	\$0.68	\$0.66	\$0.89
Horsepower rating of prime movers and electric motors driven by purchased energy, total.....	1,084,923	64,531	600,455	525,400	58,809	16,246	10,642
Per wage earner <sup>14</sup> .....	31.7	10.4	26.3	31.2	30.0	9.8	31.4
Prime movers.....	968,994	63,680	531,338	458,133	56,980	16,223	10,273
Electric motors driven by purchased energy.....	115,934	851	69,119	67,287	1,828	23	369
Horsepower rating of electric motors driven by energy generated by reporting companies.....	24,645	87	2,194	1,981	72	141	5
Electric energy consumed (thousands of kw.-hrs.), total.....	200,891	1,131	97,699	94,136	3,494	69	474
Purchased.....	178,195	917	93,787	90,547	3,218	22	474
Generated by reporting companies.....	24,696	214	3,912	3,589	276	47	.....
Fuels consumed:							
Anthracite (tons of 2,000 pounds).....	2	3	380	292	88	.....	.....
Bituminous coal (tons of 2,000 pounds).....	1,739	1,151	589	431	30	108	96
Fuel oil (barrels of 42 gallons).....	819,893	11,568	346,986	314,136	31,832	1,018	129,576
Gasoline and kerosene (gallons).....	4,956,517	393,112	2,675,325	2,504,246	229,253	141,826	270,750
Natural gas (thousands of cubic feet).....	96,975,376	6,613,259	39,769,736	35,504,796	3,403,529	861,411	218,675

<sup>10</sup> The distribution of man-hours between "Drilling wells and rig building" and "Doing other work" is approximate. Many of the concerns reported all man-hours, other than those devoted to operating and maintaining wells, under "Drilling wells and rig building," either because of lack of separate records or a broad interpretation of activities included with drilling and rig building.

<sup>11</sup> Computed by dividing man-hours for "Drilling wells and rig building" by the sum of the footage of wells "Drilled by reporting companies for own account" and the "Footage of wells drilled by reporting companies for other concerns."

<sup>12</sup> Each concern was requested to report averages computed by adding the numbers of wage earners receiving pay in each active pay-roll period (devoted to operating or drilling wells) and dividing this sum by the number of active periods. The sum of these averages is usually higher than the "Number of wage earners (average for the year, including inactive periods)" presented elsewhere in this table because the latter is, whereas the former is not, affected by figures for months during which no wage earners were employed. Concerns were requested to report as part-time wage earners all those who worked substantially fewer hours per week than the number of hours in the full-time workweek.

<sup>13</sup> Computed by dividing wages by total number of man-hours worked by wage earners, regardless of the nature of their tasks, the amount of overtime worked, or other conditions of employment. These average hourly earnings should not be interpreted as hourly wage rates. The latter apply to specific occupations and frequently take account of special conditions, such as overtime work.

<sup>14</sup> Computed by dividing the horsepower rating of power equipment by "Number of wage earners (average for the year, including inactive periods)."

## CRUDE PETROLEUM AND NATURAL GAS

139

TABLE 8.—NUMBER OF WELLS PRODUCING, SHUT IN, DRILLED, SOLD OR LEASED, ABANDONED, AND USED FOR REPRESSURING AND FLOODING IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	Ark.	Calif.	Colo.	Ill.	Ind.	Kans.	Ky.	La.	Mich.	Miss.	Mo.
Producing, December 31: <sup>2</sup>												
Oil wells—												
1939.....	300,179	2,809	16,538	201	18,935	1,194	18,555	7,793	5,048	2,610	9	64
1938.....	291,218	2,871	15,804	198	14,754	1,081	18,197	7,698	4,573	2,022	.....	62
Gas wells—												
1939.....	47,466	178	119	22	46	691	1,683	2,075	1,483	392	33	68
1938.....	45,994	174	106	23	37	662	1,663	2,024	1,472	349	46	71
Shut in (idle), December 31: <sup>3</sup>												
Oil wells—												
1939.....	12,834	139	3,609	56	663	27	1,102	75	428	17	.....	5
1938.....	12,669	189	3,652	72	525	24	933	83	533	13	.....	.....
Gas wells—												
1939.....	4,850	14	56	8	2	56	103	382	109	8	.....	10
1938.....	5,813	13	54	7	2	60	109	331	84	11	.....	.....
Drilled and completed during 1939, total <sup>4</sup> .....	22,560	194	986	18	3,101	241	1,577	320	1,111	1,190	32	59
Oil wells.....	17,263	163	851	5	2,770	127	1,133	155	778	760	9	7
Gas wells.....	1,594	7	16	.....	12	33	129	80	80	50	.....	10
Dry holes.....	3,703	24	119	13	319	81	315	85	253	380	23	42
Drilled on contract for reporting companies, total.....	14,085	157	353	16	2,258	157	1,133	160	546	751	16	50
Oil wells.....	11,004	131	294	5	2,046	86	857	67	382	493	3	7
Gas wells.....	964	6	8	.....	10	22	76	40	64	28	.....	9
Dry holes.....	2,117	20	51	11	202	49	200	53	100	230	13	34
Drilled by reporting companies for own account, total.....	8,475	37	633	2	843	84	444	160	565	439	16	9
Oil wells.....	6,259	32	557	.....	724	41	276	88	396	287	6	.....
Gas wells.....	830	1	8	.....	2	11	53	40	16	22	.....	1
Dry holes.....	1,586	4	68	2	117	32	115	32	153	150	10	6
In process of drilling, December 31:												
1939.....	2,112	15	207	1	220	26	108	30	150	71	6	.....
1938.....	1,757	21	174	2	184	11	101	27	114	60	.....	.....
Purchased, sold, or leased during 1939: <sup>5</sup>												
Reported purchased (or leased)—												
Oil wells.....	5,684	125	347	1	94	.....	436	190	75	52	.....	.....
Gas wells.....	451	.....	1	.....	.....	.....	24	64	14	13	.....	.....
Reported sold (or leased)—												
Oil wells.....	7,070	297	272	.....	120	.....	578	210	78	13	.....	.....
Gas wells.....	421	1	.....	.....	1	.....	78	4	5	10	.....	1
Abandoned during 1939:												
Oil wells.....	6,749	103	235	19	425	11	463	46	407	207	.....	.....
Gas wells.....	1,115	1	2	.....	2	8	61	38	53	13	8	2
Used for repressuring or flooding, December 31, 1939.....	23,688	1	47	3	338	13	886	315	71	15	.....	1

  

ITEM	Mont.	N. Mex.	N. Y.	Ohio	Okla.	Pa.	Tenn.	Tex.	W. Va.	Wyo.	Iowa, Nebr., S. Dak., Utah, and Wash.
Producing, December 31: <sup>2</sup>											
Oil wells—											
1939.....	1,637	2,878	12,837	10,250	48,314	49,172	38	86,721	14,017	2,562	1
1938.....	1,517	2,472	12,390	12,004	48,750	48,325	38	81,732	14,230	2,496	1
Gas wells—											
1939.....	430	105	1,892	4,761	2,070	18,312	3	2,847	12,120	111	20
1938.....	421	101	1,821	4,726	2,037	15,320	1	2,719	12,086	115	20
Shut in (idle), December 31: <sup>3</sup>											
Oil wells—											
1939.....	156	130	197	181	2,592	1,223	2	1,258	209	765	.....
1938.....	205	44	233	208	2,404	1,339	.....	1,374	203	634	.....
Gas wells—											
1939.....	35	19	119	784	298	1,340	.....	382	1,043	101	1
1938.....	26	16	131	787	312	2,412	.....	285	1,081	91	1
Drilled and completed during 1939, total <sup>4</sup> .....	143	578	639	416	1,795	1,733	7	7,895	426	98	1
Oil wells.....	107	517	544	68	1,312	1,379	3	6,420	77	78	.....
Gas wells.....	18	11	32	238	90	238	1	263	281	7	.....
Dry holes.....	18	50	63	112	393	116	3	1,212	68	13	1
Drilled on contract for reporting companies, total.....	58	372	531	221	946	1,345	5	4,646	289	75	.....
Oil wells.....	40	335	465	53	677	1,120	2	3,832	50	59	.....
Gas wells.....	13	10	19	112	41	133	1	178	189	5	.....
Dry holes.....	5	27	47	56	228	92	2	636	50	11	.....
Drilled by reporting companies for own account, total.....	85	206	108	195	849	368	2	3,249	137	23	1
Oil wells.....	67	182	79	15	635	259	1	2,588	27	19	.....
Gas wells.....	5	1	13	124	49	105	.....	85	92	2	.....
Dry holes.....	13	23	18	56	165	24	1	578	18	2	1
In process of drilling, December 31:											
1939.....	14	60	50	36	168	178	.....	880	69	21	4
1938.....	13	69	37	24	163	110	.....	554	54	19	.....
Purchased, sold, or leased during 1939: <sup>5</sup>											
Reported purchased (or leased)—											
Oil wells.....	86	7	131	20	1,560	400	.....	1,900	91	189	.....
Gas wells.....	2	2	67	14	52	79	1	61	56	1	.....
Reported sold (or leased)—											
Oil wells.....	98	18	.....	1,345	1,861	254	.....	1,732	185	28	.....
Gas wells.....	2	2	2	29	59	58	.....	40	129	.....	.....
Abandoned during 1939:											
Oil wells.....	24	16	264	525	1,259	797	1	1,715	210	22	.....
Gas wells.....	.....	4	38	189	64	339	.....	79	212	2	.....
Used for repressuring or flooding, December 31, 1939.....	18	4	4,406	287	4,092	11,148	.....	1,195	578	270	.....

<sup>1</sup> For definition of the industry see table 7, footnote 1; statistics include wells for both producing and nonproducing operations. For definition of nonproducing operations included, see table 7, footnote 3. Wells that produced both oil and gas were classified according to the more valuable product.

<sup>2</sup> Statistics include wells temporarily idle because of proration restrictions.

<sup>3</sup> Statistics exclude wells temporarily idle because of proration restrictions.

<sup>4</sup> Statistics represent wells drilled and completed in 1939, including those completed in 1939 although begun in 1938 and wells drilled and abandoned in 1939 before completion. Wells drilled and abandoned before completion are included with dry holes.

<sup>5</sup> Figures for number of wells sold (or leased) differ from those for number of wells reported purchased (or leased) partly because some of the companies that sold (or leased) wells and that purchased (or leased) wells did not come within the scope of the census canvass.

## MINERAL INDUSTRIES

TABLE 9.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	UNITED STATES			ARKANSAS			CALIFORNIA		
	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells
Number of wells drilled, total.....	22,560	14,085	8,475	194	157	37	986	553	633
Oil wells.....	17,263	11,004	6,259	163	131	32	851	294	557
Gas wells.....	1,594	984	630	7	6	1	16	8	8
Dry holes.....	3,703	2,117	1,586	24	20	4	119	51	69
Footage drilled, total.....	72,191,160	43,174,421	29,016,739	1,260,627	1,045,772	214,855	5,500,099	1,670,262	3,829,637
Oil wells.....	55,837,519	33,802,705	22,034,814	1,111,298	920,067	191,231	4,653,604	1,427,337	3,428,267
Gas wells.....	4,439,105	2,775,895	1,663,210	26,073	18,074	7,999	50,444	22,725	27,719
Dry holes.....	11,914,536	6,595,821	5,318,715	123,256	107,631	15,625	596,051	220,200	375,651
Average footage drilled per well, all wells.....	3,200	3,065	3,424	6,498	6,661	5,807	5,578	4,732	6,050
Oil wells.....	3,235	3,072	3,521	6,818	7,023	5,976	5,703	4,855	6,151
Gas wells.....	2,785	2,880	2,640	3,725	3,012	7,999	3,153	2,941	3,465
Dry holes.....	3,218	3,116	3,354	5,136	5,362	3,906	5,009	4,318	5,527
Cost of drilling and equipping wells, total <sup>7</sup> .....	\$404,903,532	\$239,975,306	\$164,928,226	\$9,026,863	\$7,723,031	\$1,305,832	\$65,477,197	\$19,582,922	\$45,694,275
Per well.....	\$17,948	\$17,038	\$19,461	\$46,541	\$49,191	\$35,293	\$66,407	\$55,476	\$72,503
Per foot.....	\$5.61	\$5.56	\$5.68	\$7.16	\$7.39	\$6.08	\$11.90	\$11.72	\$11.06
Oil wells.....	\$330,545,734	\$197,925,791	\$132,619,943	\$8,165,227	\$6,994,089	\$1,171,138	\$58,910,573	\$17,725,280	\$41,185,293
Per well.....	\$19,148	\$17,987	\$21,169	\$50,093	\$53,390	\$36,598	\$69,225	\$60,290	\$73,941
Per foot.....	\$5.92	\$5.86	\$6.02	\$7.35	\$7.60	\$6.12	\$12.14	\$12.42	\$12.02
Gas wells.....	\$20,925,748	\$13,930,829	\$6,995,119	\$173,141	\$99,921	\$73,220	\$622,275	\$215,397	\$406,886
Per well.....	\$13,128	\$14,451	\$11,103	\$24,734	\$16,654	\$73,220	\$38,892	\$28,923	\$50,861
Per foot.....	\$4.71	\$5.02	\$4.21	\$6.64	\$5.53	\$9.15	\$12.34	\$9.48	\$14.68
Dry holes.....	\$53,432,050	\$28,118,886	\$25,313,164	\$690,485	\$629,021	\$61,474	\$5,944,349	\$1,642,255	\$4,302,094
Per well.....	\$14,429	\$13,282	\$15,960	\$28,771	\$31,451	\$15,368	\$49,953	\$32,201	\$63,266
Per foot.....	\$4.48	\$4.26	\$4.78	\$5.60	\$5.84	\$3.93	\$9.97	\$7.46	\$11.45
Cost excluding amount paid contractors, total.....	\$256,922,854	\$100,620,380	\$156,302,474	\$4,429,959	\$3,223,921	\$1,206,038	\$53,129,542	\$9,441,707	\$43,687,835
Oil wells.....	\$213,806,330	\$98,094,005	\$125,712,325	\$4,147,796	\$3,061,588	\$1,066,208	\$46,100,924	\$8,928,005	\$39,172,919
Gas wells.....	\$12,865,745	\$5,876,760	\$6,686,965	\$89,924	\$25,182	\$84,742	\$500,444	\$110,646	\$589,798
Dry holes.....	\$30,750,779	\$6,847,615	\$23,903,164	\$192,239	\$137,151	\$55,088	\$4,528,174	\$403,056	\$4,125,118
Cost of drilling, total.....	\$131,718,421	\$30,693,682	\$101,024,539	\$1,653,636	\$920,455	\$733,181	\$32,257,095	\$3,357,781	\$28,699,714
Oil wells.....	\$98,228,035	\$23,549,121	\$74,678,914	\$1,463,258	\$821,881	\$641,377	\$27,698,884	\$2,999,453	\$24,699,431
Gas wells.....	\$6,343,959	\$1,883,332	\$4,460,627	\$51,919	\$8,659	\$43,260	\$325,738	\$38,108	\$287,630
Dry holes.....	\$27,146,427	\$5,261,429	\$21,884,998	\$138,459	\$89,915	\$48,544	\$4,232,473	\$319,820	\$3,912,653
Cost of equipping wells, total.....	\$125,204,433	\$69,926,498	\$55,277,935	\$2,776,323	\$2,303,466	\$472,857	\$20,872,447	\$6,084,326	\$14,788,121
Oil wells.....	\$115,578,295	\$64,544,884	\$51,033,411	\$2,684,538	\$2,239,707	\$444,831	\$20,402,040	\$5,928,552	\$14,473,486
Gas wells.....	\$6,021,786	\$3,785,428	\$2,228,358	\$38,005	\$18,523	\$21,482	\$174,706	\$72,556	\$102,168
Dry holes.....	\$3,604,352	\$1,596,186	\$2,018,166	\$53,780	\$47,236	\$6,544	\$295,701	\$83,236	\$212,465
Casing, total.....	\$75,317,098	\$40,632,087	\$34,685,001	\$1,903,260	\$1,602,952	\$300,308	\$13,243,824	\$3,766,016	\$9,477,808
Oil wells.....	\$67,729,623	\$36,547,569	\$31,182,054	\$1,821,724	\$1,539,851	\$281,873	\$12,893,096	\$3,659,161	\$9,233,935
Gas wells.....	\$4,347,254	\$2,723,948	\$1,623,306	\$29,209	\$16,120	\$13,089	\$83,805	\$38,762	\$45,043
Dry holes.....	\$3,240,211	\$1,360,570	\$1,879,641	\$52,327	\$46,981	\$5,346	\$256,923	\$67,093	\$189,830
Equipping for flowing and pumping, total.....	\$45,404,163	\$26,788,988	\$18,615,195	\$839,551	\$674,009	\$165,542	\$5,969,289	\$1,792,901	\$4,176,388
Oil wells.....	\$43,494,717	\$25,594,647	\$17,899,870	\$829,302	\$673,351	\$155,951	\$5,874,952	\$1,756,971	\$4,117,981
Gas wells.....	\$1,597,075	\$1,005,667	\$591,408	\$8,796	\$403	\$8,393	\$71,582	\$25,554	\$46,028
Dry holes.....	\$312,391	\$198,474	\$123,917	\$1,453	\$255	\$1,198	\$22,755	\$10,376	\$12,379
Production derricks, total.....	\$4,483,162	\$2,505,423	\$1,977,739	\$33,512	\$26,505	\$7,007	\$1,659,334	\$525,409	\$1,133,925
Oil wells.....	\$4,353,955	\$2,402,468	\$1,951,497	\$33,512	\$26,505	\$7,007	\$1,633,992	\$512,420	\$1,121,572
Gas wells.....	\$77,457	\$65,813	\$11,644	.....	.....	.....	\$9,319	\$7,222	\$2,097
Dry holes.....	\$51,750	\$37,142	\$14,608	.....	.....	.....	\$16,023	\$5,787	\$10,256
Amount paid or due contractors for drilling and equipping wells, total <sup>8</sup> .....	\$147,980,678	\$139,354,926	\$8,625,752	\$4,598,904	\$4,499,110	\$99,794	\$12,347,655	\$10,141,215	\$2,206,440
Oil wells.....	\$116,739,404	\$109,831,786	\$6,907,618	\$4,017,431	\$3,932,501	\$84,930	\$10,809,649	\$8,797,275	\$2,012,374
Gas wells.....	\$8,560,003	\$8,251,669	\$308,134	\$83,217	\$74,739	\$8,478	\$121,831	\$104,741	\$17,090
Dry holes.....	\$22,681,271	\$21,271,271	\$1,410,000	\$498,256	\$491,870	\$6,386	\$1,416,175	\$1,239,199	\$176,976

See footnotes at end of table.

## CRUDE PETROLEUM AND NATURAL GAS

141

TABLE 9.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>—Continued

ITEM	ILLINOIS			INDIANA			KANSAS		
	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells
Number of wells drilled, total.....	3,101	2,258	843	241	157	84	1,577	1,133	444
Oil wells.....	2,770	2,046	724	127	86	41	1,133	857	276
Gas wells.....	12	10	2	33	22	11	129	76	53
Dry holes.....	319	202	117	81	49	32	315	200	115
Footage drilled, total.....	6,382,973	4,735,884	1,647,089	441,955	296,848	145,107	4,569,315	3,513,829	1,055,486
Oil wells.....	5,590,637	4,218,183	1,372,454	281,562	203,464	78,098	3,468,673	2,751,341	717,332
Gas wells.....	17,640	11,884	5,756	28,162	18,339	9,823	227,252	162,186	45,066
Dry holes.....	774,696	505,817	268,879	132,231	75,045	57,186	873,390	580,302	293,088
Average footage drilled per well, all wells.....	2,058	2,097	1,954	1,834	1,891	1,727	2,897	3,101	2,377
Oil wells.....	2,018	2,062	1,896	2,217	2,366	1,905	3,061	3,210	2,599
Gas wells.....	1,470	1,188	2,878	853	834	893	1,762	2,397	850
Dry holes.....	2,429	2,504	2,298	1,632	1,532	1,787	2,773	2,902	2,549
Cost of drilling and equipping wells, total <sup>2</sup> .....	\$34,282,582	\$26,656,813	\$7,605,769	\$2,053,907	\$1,526,415	\$527,492	\$22,652,658	\$18,421,385	\$4,231,273
Per well.....	\$11,049	\$11,805	\$9,022	\$8,522	\$9,722	\$6,280	\$14,364	\$16,259	\$9,530
Per foot.....	\$5.37	\$5.83	\$4.62	\$4.65	\$5.14	\$3.84	\$4.98	\$5.24	\$4.01
Oil wells.....	\$31,409,761	\$24,688,435	\$8,721,326	\$1,599,803	\$1,245,112	\$354,491	\$18,647,101	\$15,338,425	\$3,310,676
Per well.....	\$11,339	\$12,067	\$9,284	\$12,595	\$14,478	\$8,648	\$16,458	\$17,895	\$11,995
Per foot.....	\$5.62	\$5.85	\$4.90	\$5.68	\$6.12	\$4.54	\$5.38	\$5.57	\$4.62
Gas wells.....	\$72,411	\$47,981	\$24,430	\$76,895	\$46,226	\$30,469	\$1,041,719	\$650,554	\$91,165
Per well.....	\$6,034	\$4,798	\$12,215	\$2,324	\$2,101	\$2,770	\$8,075	\$12,507	\$1,720
Per foot.....	\$4.10	\$4.04	\$4.24	\$2.72	\$2.52	\$3.10	\$4.55	\$5.22	\$2.02
Dry holes.....	\$2,780,410	\$1,920,397	\$860,013	\$377,609	\$235,077	\$142,532	\$2,963,838	\$2,134,406	\$829,432
Per well.....	\$8,716	\$9,507	\$7,351	\$4,662	\$4,454	\$4,454	\$9,409	\$10,672	\$7,212
Per foot.....	\$3.59	\$3.80	\$3.20	\$2.86	\$3.13	\$2.49	\$3.39	\$3.68	\$2.83
Cost excluding amount paid contractors, total.....	\$16,537,030	\$10,048,895	\$6,488,135	\$1,116,564	\$613,014	\$503,550	\$11,947,528	\$7,820,441	\$4,127,087
Oil wells.....	\$15,405,970	\$9,725,574	\$5,680,396	\$918,711	\$580,128	\$338,583	\$10,298,030	\$7,062,225	\$3,215,805
Gas wells.....	\$50,336	\$25,906	\$24,430	\$48,831	\$18,362	\$30,469	\$404,861	\$315,661	\$89,190
Dry holes.....	\$1,080,724	\$297,415	\$783,309	\$149,022	\$14,524	\$134,498	\$1,244,647	\$422,555	\$822,092
Cost of drilling, total.....	\$5,811,189	\$1,654,168	\$3,957,021	\$494,891	\$188,319	\$308,572	\$4,813,228	\$2,262,728	\$2,550,502
Oil wells.....	\$4,839,109	\$1,617,415	\$3,221,694	\$388,718	\$173,280	\$165,458	\$3,597,624	\$1,664,623	\$1,733,001
Gas wells.....	\$31,874	\$13,077	\$18,597	\$21,542	\$19,031	\$19,031	\$139,690	\$79,926	\$59,784
Dry holes.....	\$940,406	\$223,676	\$716,730	\$134,631	\$12,548	\$122,083	\$1,075,914	\$318,177	\$757,737
Cost of equipping wells, total.....	\$10,725,841	\$8,194,727	\$2,531,114	\$621,873	\$424,696	\$196,978	\$7,154,300	\$5,557,715	\$1,576,585
Oil wells.....	\$10,566,861	\$8,108,159	\$2,458,702	\$579,993	\$406,868	\$173,125	\$6,700,406	\$5,217,602	\$1,482,804
Gas wells.....	\$18,662	\$12,629	\$5,833	\$27,289	\$15,851	\$11,438	\$285,161	\$235,735	\$29,428
Dry holes.....	\$140,318	\$73,739	\$66,579	\$14,391	\$1,976	\$12,415	\$168,733	\$104,378	\$64,355
Casing, total.....	\$3,970,401	\$3,070,232	\$900,169	\$281,293	\$194,516	\$86,777	\$3,445,335	\$2,711,887	\$733,448
Oil wells.....	\$3,865,663	\$3,012,632	\$853,031	\$252,555	\$186,440	\$66,115	\$3,120,585	\$2,482,021	\$658,565
Gas wells.....	\$12,408	\$8,075	\$4,333	\$14,970	\$6,273	\$8,697	\$170,852	\$155,151	\$15,701
Dry holes.....	\$82,330	\$49,525	\$42,805	\$13,768	\$1,803	\$11,965	\$153,897	\$94,715	\$59,182
Equipping for flowing and pumping, total.....	\$6,412,423	\$4,867,374	\$1,545,049	\$287,055	\$178,954	\$107,101	\$3,076,542	\$2,308,564	\$768,178
Oil wells.....	\$6,360,316	\$4,840,541	\$1,519,775	\$274,113	\$170,203	\$103,910	\$2,976,826	\$2,226,346	\$750,480
Gas wells.....	\$6,254	\$4,754	\$1,500	\$12,319	\$9,578	\$2,741	\$89,972	\$77,449	\$12,525
Dry holes.....	\$45,853	\$22,079	\$23,774	\$625	\$173	\$450	\$9,743	\$4,570	\$5,173
Production derricks, total.....	\$343,017	\$257,121	\$85,896	\$53,325	\$50,225	\$3,100	\$612,423	\$537,464	\$74,959
Oil wells.....	\$340,882	\$254,986	\$85,896	\$53,325	\$50,225	\$3,100	\$602,994	\$529,235	\$73,759
Gas wells.....	.....	.....	.....	.....	.....	.....	\$4,336	\$3,136	\$1,200
Dry holes.....	\$2,135	\$2,135	.....	.....	.....	.....	\$5,093	\$5,093	.....
Amount paid or due contractors for drilling and equipping wells, total <sup>3</sup> .....	\$17,725,552	\$16,607,918	\$1,117,634	\$937,343	\$813,401	\$23,942	\$10,705,130	\$10,600,944	\$104,186
Oil wells.....	\$16,003,791	\$14,962,861	\$1,040,930	\$880,892	\$664,984	\$15,908	\$8,349,071	\$8,254,200	\$94,871
Gas wells.....	\$22,075	\$22,075	.....	\$27,864	\$27,864	.....	\$636,868	\$634,893	\$1,975
Dry holes.....	\$1,699,686	\$1,622,982	\$76,704	\$228,587	\$220,553	\$8,034	\$1,719,191	\$1,711,851	\$7,340

See footnotes at end of table.



## MINERAL INDUSTRIES

TABLE 9.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>—Continued

ITEM	KENTUCKY AND TENNESSEE <sup>2</sup>			LOUISIANA AND MISSISSIPPI <sup>3</sup>			MICHIGAN			MISSOURI AND NEBRASKA <sup>4</sup>
	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells	All wells
Number of wells drilled, total....	327	165	162	1,143	582	561	1,190	751	439	60
Oil wells.....	158	69	69	787	385	402	780	493	287	7
Gas wells.....	81	41	40	80	64	16	50	28	22	10
Dry holes.....	88	55	33	276	113	163	360	230	150	43
Footage drilled, total.....	505,286	295,170	210,118	6,388,193	3,186,763	3,181,430	2,325,234	1,457,871	887,363	76,196
Oil wells.....	193,375	88,939	104,436	4,372,946	2,291,231	2,081,665	1,559,846	1,003,052	556,794	3,729
Gas wells.....	163,386	103,737	59,649	294,396	196,195	98,203	65,711	36,186	29,525	5,800
Dry holes.....	148,527	102,494	46,033	1,700,849	699,237	1,001,562	699,677	418,633	281,044	66,668
Average footage drilled per well, all wells.....	1,545	1,789	1,297	5,571	5,670	5,476	1,954	1,941	1,976	1,270
Oil wells.....	1,224	1,289	1,473	5,556	5,951	5,178	2,052	2,035	2,085	533
Gas wells.....	2,017	2,530	1,491	3,680	3,086	6,138	1,314	1,292	1,542	530
Dry holes.....	1,688	1,864	1,395	6,162	6,188	6,145	1,841	1,820	1,874	1,550
Cost of drilling and equipping wells, total.....	\$1,871,219	\$1,186,654	\$884,565	\$52,089,705	\$24,992,263	\$27,107,442	\$8,228,422	\$5,685,712	\$2,542,710	\$139,315
Per well.....	\$5,722	\$7,192	\$4,226	\$45,582	\$44,470	\$46,657	\$6,915	\$7,571	\$5,792	\$2,322
Per foot.....	\$3.70	\$4.02	\$3.26	\$8.18	\$7.84	\$8.52	\$3.54	\$3.90	\$2.93	\$1.83
Oil wells.....	\$757,894	\$430,029	\$327,665	\$36,738,755	\$18,467,086	\$18,271,689	\$6,575,477	\$4,575,399	\$2,000,078	\$9,110
Per well.....	\$4,797	\$8,232	\$5,684	\$46,682	\$47,966	\$45,452	\$8,652	\$9,281	\$7,491	\$1,301
Per foot.....	\$3.92	\$4.84	\$3.14	\$8.40	\$8.06	\$8.78	\$4.22	\$4.56	\$3.59	\$2.44
Gas wells.....	\$583,060	\$379,713	\$203,547	\$2,395,954	\$1,418,997	\$976,957	\$214,831	\$125,352	\$89,479	\$6,272
Per well.....	\$7,198	\$9,261	\$5,084	\$29,949	\$22,172	\$61,060	\$4,297	\$4,477	\$4,067	\$827
Per foot.....	\$3.57	\$3.66	\$3.41	\$8.14	\$7.23	\$9.95	\$3.27	\$3.46	\$3.03	\$1.06
Dry holes.....	\$530,265	\$376,912	\$153,353	\$12,964,996	\$5,106,180	\$7,858,818	\$1,438,114	\$984,961	\$453,153	\$123,933
Per well.....	\$6,028	\$6,853	\$4,647	\$46,975	\$45,187	\$48,214	\$3,785	\$4,282	\$3,021	\$2,882
Per foot.....	\$3.57	\$3.68	\$3.33	\$7.62	\$7.30	\$7.85	\$2.06	\$2.35	\$1.61	\$1.86
Cost excluding amount paid contractors, total.....	\$1,084,130	\$404,652	\$279,478	\$36,191,077	\$10,876,991	\$25,314,086	\$5,149,026	\$2,687,001	\$2,462,025	\$32,949
Oil wells.....	\$496,777	\$172,773	\$324,004	\$25,836,335	\$8,582,415	\$17,273,920	\$4,448,591	\$2,488,870	\$1,959,721	\$629
Gas wells.....	\$363,403	\$180,250	\$203,153	\$1,458,858	\$874,122	\$884,738	\$102,121	\$29,061	\$75,080	\$1,157
Dry holes.....	\$223,950	\$71,629	\$152,321	\$9,666,884	\$1,740,454	\$7,155,430	\$596,514	\$169,070	\$429,244	\$51,163
Cost of drilling, total.....	\$613,349	\$156,745	\$456,604	\$22,809,636	\$4,349,263	\$18,460,373	\$1,541,642	\$378,194	\$1,163,448	\$32,012
Oil wells.....	\$216,228	\$58,567	\$177,659	\$14,076,778	\$2,783,677	\$11,293,101	\$1,073,561	\$290,085	\$783,478	.....
Gas wells.....	\$190,830	\$53,973	\$136,857	\$847,538	\$235,420	\$612,118	\$47,227	\$10,000	\$37,227	\$849
Dry holes.....	\$206,295	\$64,305	\$141,988	\$7,885,320	\$1,330,166	\$6,555,154	\$420,854	\$78,109	\$342,745	\$31,163
Cost of equipping wells, total.....	\$470,781	\$247,907	\$222,874	\$13,381,441	\$6,527,728	\$6,853,713	\$3,607,364	\$2,308,807	\$1,298,577	\$937
Oil wells.....	\$280,551	\$134,206	\$146,345	\$11,759,557	\$5,778,738	\$5,980,819	\$3,375,030	\$2,198,785	\$1,176,245	\$629
Gas wells.....	\$172,573	\$106,377	\$68,196	\$611,320	\$338,702	\$272,618	\$54,894	\$19,061	\$35,833	\$308
Dry holes.....	\$17,657	\$7,324	\$10,333	\$1,010,564	\$410,268	\$600,276	\$177,460	\$90,961	\$86,499	.....
Casing, total.....	\$269,465	\$140,918	\$128,547	\$9,133,561	\$4,382,703	\$4,750,858	\$1,817,241	\$1,184,228	\$633,013	\$323
Oil wells.....	\$150,714	\$66,809	\$84,105	\$7,735,822	\$3,787,532	\$3,968,290	\$1,808,557	\$1,082,594	\$525,983	\$323
Gas wells.....	\$102,021	\$67,555	\$34,466	\$466,937	\$262,659	\$204,278	\$44,245	\$15,854	\$28,391	.....
Dry holes.....	\$16,730	\$6,754	\$9,976	\$930,802	\$352,512	\$578,290	\$164,439	\$85,780	\$78,659	.....
Equipping for flowing and pumping, total.....	\$185,287	\$106,189	\$79,096	\$4,122,774	\$2,072,610	\$2,050,164	\$1,553,290	\$982,826	\$570,464	\$614
Oil wells.....	\$113,808	\$66,797	\$47,011	\$3,915,164	\$1,954,526	\$1,960,838	\$1,529,620	\$974,438	\$555,182	\$306
Gas wells.....	\$70,552	\$33,822	\$31,730	\$139,686	\$71,346	\$66,340	\$10,649	\$3,207	\$7,442	\$308
Dry holes.....	\$927	\$570	\$357	\$67,924	\$46,738	\$21,186	\$13,021	\$5,181	\$7,840	.....
Production derricks, total.....	\$16,029	\$800	\$15,229	\$125,106	\$72,415	\$52,691	\$236,853	\$141,753	\$95,100	.....
Oil wells.....	\$16,029	\$800	\$15,229	\$108,571	\$56,680	\$51,891	\$236,853	\$141,753	\$95,100	.....
Gas wells.....	.....	.....	.....	\$4,697	\$4,697	.....	.....	.....	.....	.....
Dry holes.....	.....	.....	.....	\$11,838	\$11,038	\$800	.....	.....	.....	.....
Amount paid or due contractors for drilling and equipping wells, total.....	\$787,089	\$782,002	\$5,367	\$15,908,628	\$14,115,272	\$1,793,356	\$3,079,396	\$2,998,711	\$80,685	\$106,366
Oil wells.....	\$261,117	\$257,256	\$3,861	\$10,902,420	\$9,904,671	\$997,749	\$2,126,886	\$2,086,529	\$40,357	\$6,481
Gas wells.....	\$219,657	\$219,463	\$194	\$937,098	\$844,875	\$92,221	\$112,710	\$98,291	\$18,419	\$5,115
Dry holes.....	\$306,315	\$305,283	\$1,032	\$4,069,112	\$3,365,728	\$703,386	\$839,800	\$815,891	\$23,909	\$92,770

See footnotes at end of table.

## CRUDE PETROLEUM AND NATURAL GAS

143

TABLE 9.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>—Continued

ITEM	MISSOURI AND NEBRASKA—Con.		MONTANA			NEW MEXICO			NEW YORK <sup>5</sup>		
	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells
Number of wells drilled, total..	50	10	143	58	85	578	372	206	639	531	108
Oil wells.....	7	.....	107	40	67	517	335	182	544	465	79
Gas wells.....	9	.....	18	13	5	11	10	1	32	19	13
Dry holes.....	34	9	18	5	13	50	27	23	63	47	16
Footage drilled, total.....	61,374	14,822	320,706	126,860	193,846	2,190,508	1,390,631	799,877	1,024,917	838,451	186,466
Oil wells.....	3,728	.....	246,651	97,293	149,358	1,977,591	1,265,124	712,467	712,350	607,493	104,857
Gas wells.....	5,115	685	29,962	16,211	13,751	33,161	31,271	1,890	107,626	76,475	31,151
Dry holes.....	52,531	14,137	44,093	13,356	30,737	179,756	94,236	85,520	204,941	154,483	50,458
Average footage drilled per well, all wells.....	1,227	1,482	2,243	2,187	2,281	3,790	3,738	3,883	1,604	1,579	1,727
Oil wells.....	533	.....	2,305	2,432	2,229	3,825	3,776	3,915	1,309	1,308	1,327
Gas wells.....	569	685	1,865	1,247	2,750	3,015	3,127	1,890	3,363	4,025	2,396
Dry holes.....	1,545	1,571	2,450	2,671	2,384	3,595	3,490	3,718	3,253	3,287	3,154
Cost of drilling and equipping wells, total <sup>7</sup> .....	\$107,129	\$32,186	\$1,479,642	\$649,335	\$830,307	\$14,179,229	\$10,140,340	\$4,038,889	\$1,931,568	\$1,600,382	\$331,206
Per well.....	\$2,143	\$3,219	\$10,347	\$11,195	\$9,768	\$24,532	\$27,259	\$19,806	\$3,023	\$3,014	\$3,087
Per foot.....	\$1.75	\$2.17	\$4.61	\$5.12	\$4.28	\$6.47	\$7.29	\$5.05	\$1.88	\$1.91	\$1.78
Oil wells.....	\$9,110	.....	\$1,207,196	\$535,796	\$671,400	\$12,871,352	\$9,216,688	\$3,654,664	\$1,085,279	\$930,302	\$154,977
Per well.....	\$1,301	.....	\$11,282	\$15,395	\$10,021	\$24,896	\$27,513	\$20,061	\$1,995	\$2,001	\$1,962
Per foot.....	\$2.44	.....	\$4.89	\$5.51	\$4.50	\$8.51	\$7.29	\$5.13	\$1.52	\$1.53	\$1.48
Gas wells.....	\$5,249	\$1,023	\$148,087	\$68,734	\$79,333	\$279,018	\$270,743	\$8,275	\$367,104	\$280,208	\$78,898
Per well.....	\$583	\$1,023	\$8,226	\$5,287	\$15,867	\$25,365	\$27,074	\$8,275	\$11,472	\$15,274	\$5,915
Per foot.....	\$1.03	\$1.49	\$4.94	\$4.24	\$5.77	\$8.41	\$8.66	\$4.38	\$3.41	\$3.79	\$2.47
Dry holes.....	\$92,770	\$31,163	\$124,379	\$44,805	\$79,574	\$1,028,859	\$652,909	\$375,950	\$479,185	\$378,851	\$99,331
Per well.....	\$2,729	\$3,463	\$6,910	\$8,121	\$6,121	\$20,577	\$24,182	\$16,346	\$7,606	\$8,082	\$6,208
Per foot.....	\$1.77	\$2.20	\$2.82	\$3.35	\$2.59	\$5.72	\$6.93	\$4.40	\$2.34	\$2.46	\$1.97
Cost excluding amount paid contractors, total.....	\$763	\$32,186	\$1,075,494	\$252,687	\$822,807	\$7,868,195	\$3,949,855	\$3,918,340	\$938,018	\$606,812	\$331,206
Oil wells.....	\$629	.....	\$884,275	\$218,728	\$665,547	\$7,243,070	\$3,699,220	\$3,553,850	\$549,320	\$394,343	\$154,977
Gas wells.....	\$134	\$1,023	\$110,217	\$30,884	\$79,333	\$102,743	\$94,873	\$7,870	\$201,887	\$124,889	\$76,898
Dry holes.....	.....	\$31,163	\$81,002	\$5,075	\$77,927	\$522,382	\$165,762	\$356,620	\$186,811	\$87,480	\$99,331
Cost of drilling, total.....	.....	\$32,012	\$457,869	\$17,694	\$440,175	\$3,611,239	\$1,200,804	\$2,410,435	\$380,019	\$143,965	\$236,054
Oil wells.....	.....	.....	\$341,020	\$9,048	\$331,972	\$3,135,120	\$1,058,274	\$2,076,846	\$122,127	\$37,539	\$84,588
Gas wells.....	.....	\$849	\$51,991	\$7,275	\$44,716	\$37,830	\$31,547	\$6,283	\$75,378	\$23,243	\$52,135
Dry holes.....	.....	\$31,163	\$64,858	\$1,371	\$63,487	\$439,289	\$110,983	\$327,306	\$182,514	\$83,183	\$99,331
Cost of equipping wells, total.....	\$763	\$174	\$617,625	\$234,993	\$382,632	\$4,256,956	\$2,749,051	\$1,507,905	\$557,999	\$462,847	\$95,152
Oil wells.....	\$629	.....	\$543,255	\$209,680	\$333,575	\$4,107,950	\$2,630,946	\$1,477,004	\$427,193	\$356,804	\$70,389
Gas wells.....	\$134	\$174	\$58,228	\$23,809	\$34,417	\$64,913	\$63,326	\$1,587	\$126,508	\$101,746	\$24,763
Dry holes.....	.....	.....	\$16,144	\$1,704	\$14,440	\$84,083	\$54,779	\$29,314	\$4,297	\$4,297	.....
Casing, total.....	\$323	.....	\$364,192	\$132,830	\$231,362	\$2,718,934	\$1,748,395	\$970,539	\$217,455	\$180,732	\$36,723
Oil wells.....	\$323	.....	\$307,957	\$115,387	\$192,590	\$2,593,693	\$1,653,960	\$939,733	\$112,427	\$95,501	\$16,926
Gas wells.....	.....	.....	\$40,591	\$15,759	\$24,832	\$47,856	\$48,269	\$1,587	\$100,731	\$90,854	\$19,797
Dry holes.....	.....	.....	\$15,644	\$1,704	\$13,940	\$77,385	\$48,166	\$29,219	\$4,297	\$4,297	.....
Equipping for flowing and pumping, total.....	\$440	\$174	\$251,505	\$102,163	\$149,342	\$1,441,651	\$944,609	\$497,042	\$338,852	\$280,736	\$58,116
Oil wells.....	\$306	.....	\$233,870	\$94,313	\$139,557	\$1,419,830	\$922,883	\$496,947	\$313,074	\$259,924	\$53,150
Gas wells.....	\$134	\$174	\$17,635	\$7,850	\$9,785	\$15,113	\$15,113	.....	\$25,778	\$20,812	\$4,966
Dry holes.....	.....	.....	.....	.....	.....	\$6,708	\$6,613	\$95	.....	.....	.....
Production derricks, total.....	.....	.....	\$1,928	.....	\$1,928	\$96,371	\$56,047	\$40,324	\$1,692	\$1,379	\$313
Oil wells.....	.....	.....	\$1,428	.....	\$1,428	\$94,427	\$54,103	\$40,324	\$1,692	\$1,379	\$313
Gas wells.....	.....	.....	.....	.....	.....	\$1,944	\$1,944	.....	.....	.....	.....
Dry holes.....	.....	.....	\$500	.....	\$500	.....	.....	.....	.....	.....	.....
Amount paid or due contractors for drilling and equipping wells, total <sup>8</sup> .....	\$106,366	.....	\$404,148	\$396,648	\$7,500	\$6,311,034	\$6,190,465	\$120,549	\$993,550	\$993,550	.....
Oil wells.....	\$8,481	.....	\$322,921	\$317,068	\$5,853	\$5,628,282	\$5,527,468	\$100,814	\$535,959	\$535,959	.....
Gas wells.....	\$5,115	.....	\$37,850	\$37,850	.....	\$176,275	\$175,870	\$405	\$165,217	\$165,217	.....
Dry holes.....	\$92,770	.....	\$43,377	\$41,730	\$1,647	\$506,477	\$487,147	\$19,330	\$292,374	\$292,374	.....

See footnotes at end of table.

## MINERAL INDUSTRIES

TABLE 9.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>—Continued

ITEM	OHIO			OKLAHOMA			PENNSYLVANIA <sup>5</sup>		
	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells
Number of wells drilled, total.....	418	221	195	1,795	946	849	1,733	1,345	388
Oil wells.....	88	53	15	1,312	677	635	1,379	1,120	259
Gas wells.....	238	112	124	90	41	49	238	133	105
Dry holes.....	112	56	56	393	228	165	118	92	24
Footage drilled, total.....	904,039	473,556	430,483	4,280,893	2,508,118	1,782,775	3,048,959	2,397,669	649,090
Oil wells.....	121,274	96,347	24,927	2,941,912	1,716,912	1,225,000	2,053,890	1,712,656	341,034
Gas wells.....	520,803	252,201	268,602	197,289	102,105	95,184	617,774	374,824	242,950
Dry holes.....	261,962	125,008	136,954	1,151,692	689,101	462,591	375,495	310,589	65,106
Average footage drilled per well, all wells.....	2,173	2,143	2,208	2,390	2,651	2,100	1,758	1,783	1,673
Oil wells.....	1,783	1,618	1,662	2,242	2,536	1,929	1,489	1,529	1,317
Gas wells.....	2,207	2,252	2,166	2,192	2,490	1,943	2,596	2,618	2,314
Dry holes.....	2,339	2,232	2,446	2,931	3,022	2,804	3,237	3,374	2,713
Cost of drilling and equipping wells, total <sup>7</sup> .....	\$2,065,951	\$1,277,035	\$786,916	\$22,641,381	\$14,860,401	\$7,780,980	\$5,728,455	\$4,617,321	\$1,111,134
Per well.....	\$4,966	\$5,778	\$4,046	\$12,614	\$15,709	\$9,165	\$3,306	\$3,433	\$2,864
Oil wells.....	\$2.29	\$2.70	\$1.83	\$5.28	\$5.92	\$4.36	\$1.88	\$1.93	\$1.71
Gas wells.....	\$335,604	\$278,233	\$57,371	\$16,858,423	\$11,180,218	\$5,698,205	\$3,471,930	\$2,921,044	\$550,886
Per well.....	\$4,935	\$5,250	\$3,825	\$16,485	\$8,974	\$2,518	\$2,608	\$2,127	\$1,682
Per foot.....	\$2.77	\$2.89	\$2.30	\$5.73	\$6.50	\$4.65	\$1.69	\$1.71	\$1.62
Gas wells.....	\$1,303,447	\$758,119	\$545,328	\$912,581	\$597,166	\$315,415	\$1,504,207	\$1,049,260	\$454,947
Per well.....	\$5,623	\$6,769	\$4,398	\$10,140	\$14,565	\$6,437	\$6,320	\$7,889	\$4,333
Per foot.....	\$2.50	\$3.01	\$2.03	\$4.63	\$5.85	\$3.31	\$2.43	\$2.80	\$1.87
Dry holes.....	\$426,900	\$240,683	\$166,217	\$4,870,377	\$3,103,017	\$1,767,360	\$752,318	\$647,017	\$105,301
Per well.....	\$3,812	\$4,298	\$3,325	\$12,393	\$13,610	\$10,711	\$6,486	\$7,033	\$4,388
Per foot.....	\$1.83	\$1.93	\$1.36	\$4.23	\$4.50	\$3.82	\$2.00	\$2.08	\$1.62
Cost excluding amount paid contractors, total.....	\$1,219,498	\$459,725	\$759,773	\$13,832,797	\$6,121,292	\$7,711,505	\$2,755,163	\$1,374,878	\$1,080,285
Oil wells.....	\$178,472	\$121,495	\$56,977	\$10,932,780	\$5,292,196	\$5,640,582	\$1,723,845	\$1,201,484	\$522,361
Gas wells.....	\$822,371	\$301,502	\$520,869	\$280,874	\$235,732	\$315,142	\$822,758	\$370,135	\$452,623
Dry holes.....	\$218,655	\$36,728	\$181,927	\$2,549,143	\$593,362	\$1,755,781	\$208,560	\$103,259	\$105,301
Cost of drilling, total.....	\$592,890	\$30,717	\$512,173	\$6,894,566	\$1,756,020	\$5,138,546	\$1,003,356	\$281,538	\$721,818
Oil wells.....	\$50,610	\$19,304	\$31,306	\$4,459,883	\$1,178,484	\$3,281,399	\$396,288	\$108,910	\$287,358
Gas wells.....	\$384,959	\$35,765	\$329,194	\$280,923	\$199,308	\$416,654	\$416,654	\$85,114	\$331,540
Dry holes.....	\$177,321	\$25,648	\$151,673	\$2,153,760	\$495,919	\$1,657,841	\$190,434	\$97,514	\$102,920
Cost of equipping wells, total.....	\$626,608	\$379,008	\$247,600	\$8,938,231	\$4,365,272	\$2,572,959	\$1,751,807	\$1,393,340	\$356,467
Oil wells.....	\$127,862	\$102,191	\$25,671	\$6,472,897	\$4,113,714	\$2,359,183	\$1,327,677	\$1,092,574	\$235,003
Gas wells.....	\$822,371	\$285,737	\$191,875	\$269,951	\$154,115	\$315,142	\$406,104	\$285,021	\$121,083
Dry holes.....	\$41,334	\$11,080	\$30,254	\$195,383	\$97,443	\$97,940	\$18,126	\$15,745	\$2,331
Casing, total.....	\$407,078	\$241,880	\$165,196	\$3,338,820	\$1,966,826	\$1,371,994	\$651,315	\$526,085	\$125,230
Oil wells.....	\$59,278	\$47,811	\$11,467	\$2,975,733	\$1,785,186	\$1,190,552	\$361,807	\$309,107	\$52,500
Gas wells.....	\$315,961	\$155,286	\$130,675	\$190,024	\$101,882	\$88,042	\$276,373	\$205,302	\$71,071
Dry holes.....	\$31,837	\$38,793	\$23,054	\$173,063	\$79,658	\$93,400	\$13,335	\$11,676	\$1,659
Equipping for flowing and pumping, total.....	\$188,435	\$111,720	\$76,715	\$3,143,767	\$2,030,369	\$1,113,398	\$1,078,979	\$853,217	\$225,762
Oil wells.....	\$40,725	\$32,210	\$8,515	\$3,062,785	\$1,978,205	\$1,084,580	\$944,919	\$769,841	\$175,078
Gas wells.....	\$138,608	\$77,608	\$61,000	\$70,028	\$43,434	\$26,594	\$129,631	\$79,619	\$50,012
Dry holes.....	\$9,102	\$1,902	\$7,200	\$10,954	\$8,730	\$2,224	\$4,429	\$3,757	\$972
Production derricks, total.....	\$31,097	\$25,408	\$5,689	\$455,644	\$368,077	\$87,567	\$21,513	\$14,038	\$7,475
Oil wells.....	\$27,859	\$22,170	\$5,689	\$434,374	\$350,323	\$84,051	\$21,051	\$13,628	\$7,425
Gas wells.....	\$2,843	\$2,843	.....	\$9,899	\$8,899	\$1,200	\$100	.....	.....
Dry holes.....	\$395	\$395	.....	\$11,371	\$9,055	\$2,316	\$362	\$312	\$50
Amount paid or due contractors for drilling and equipping wells, total <sup>8</sup> .....	\$846,453	\$817,310	\$29,143	\$8,808,584	\$8,739,109	\$69,475	\$2,973,292	\$2,942,443	\$30,849
Oil wells.....	\$157,132	\$156,738	\$394	\$5,925,643	\$5,868,020	\$57,623	\$1,748,065	\$1,719,560	\$28,525
Gas wells.....	\$481,076	\$456,617	\$24,459	\$361,707	\$361,434	\$273	\$681,449	\$679,125	\$2,324
Dry holes.....	\$208,245	\$203,955	\$4,290	\$2,521,234	\$2,509,655	\$11,579	\$543,758	\$543,758	.....

<sup>1</sup> Represents statistics for drilling activities of producing operations (as defined in table 7, footnote 1) combined with those for nonproducing operations (as defined in table 7, footnote 3). Statistics represent oil wells, gas wells, and dry holes drilled and completed in 1939, including those completed in 1939 although begun in 1938 and wells drilled and abandoned in 1939 before completion. For drilling activities excluded and for explanation of terms used see appropriate footnotes to table 2. Statistics for dry holes include 33 wells with a total footage of 74,826 that were drilled and abandoned before completion. Reasons reported for abandoning these wells include "tools lost in hole," "edgewater conditions and salt water," "poor structural position," "blowout and fire," "casing collapsed," "drill pipe stuck—unable to loosen," "area proven worthless," and "finances gave out." In addition to the wells shown in the present table, concerns reported, although they were not requested to do so, 662 wells other than those drilled for oil or gas (39 water- and gas-intake wells in Kansas, 1 "brine well" in Michigan, 200 water-intake wells in New York, 49 water- and gas-intake and water-disposal wells in Oklahoma, 372 water- and air-intake wells in Pennsylvania, and 1 "air" well in Texas); the total footage of these wells was 888,482 and the cost of drilling and equipping, \$1,166,379.

Figures for columns headed "Wells drilled on contract" represent wells drilled on contract for reporting companies; those for columns headed "All other wells" represent wells drilled by reporting companies for their own account. For separate statistics for wells drilled on contract for others by concerns in the crude-petroleum and natural-gas industry see table 13.

<sup>2</sup> Tennessee, 3 oil wells, 1 gas well, and 3 dry holes.

## CRUDE PETROLEUM AND NATURAL GAS

145

TABLE 9.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>—Continued

ITEM	TEXAS			WEST VIRGINIA			WYOMING AND COLORADO <sup>6</sup>		
	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells	All wells	Wells drilled on contract	All other wells
Number of wells drilled, total.....	7,895	4,646	3,249	426	289	137	116	91	25
Oil wells.....	6,420	3,632	2,588	77	50	27	83	64	19
Gas wells.....	263	178	85	281	189	92	7	5	2
Dry holes.....	1,212	636	576	68	50	18	26	22	4
Footage drilled, total.....	31,368,941	18,061,123	13,327,818	1,173,240	757,764	415,476	421,077	358,276	64,801
Oil wells.....	25,903,875	15,048,522	10,855,353	130,956	82,519	48,437	313,551	286,447	45,104
Gas wells.....	1,151,458	754,965	396,493	680,866	557,902	322,984	21,800	15,500	5,800
Dry holes.....	4,333,608	2,257,636	2,075,972	161,418	117,343	44,075	86,226	72,329	13,697
Average footage drilled per well, all wells.....	3,976	3,887	4,102	2,754	2,622	3,033	3,630	3,915	2,592
Oil wells.....	4,035	3,927	4,194	1,701	1,650	1,794	3,778	4,194	2,374
Gas wells.....	4,378	4,241	4,665	3,135	2,952	3,510	3,043	3,100	2,900
Dry holes.....	3,576	3,550	3,604	2,374	2,347	2,449	3,316	3,288	3,474
Cost of drilling and equipping wells, total <sup>7</sup> .....	\$151,653,668	\$93,263,116	\$58,390,552	\$4,055,267	\$2,840,628	\$1,214,639	\$5,354,503	\$4,844,444	\$510,059
Per well.....	\$19,209	\$20,074	\$17,972	\$9,519	\$9,829	\$8,866	\$46,180	\$53,236	\$20,402
Per foot.....	\$4.83	\$5.16	\$4.38	\$3.46	\$3.75	\$2.92	\$12.72	\$13.80	\$7.87
Oil wells.....	\$127,870,336	\$79,720,858	\$48,149,478	\$325,970	\$232,775	\$93,195	\$3,706,143	\$3,456,912	\$247,231
Per well.....	\$19,917	\$20,804	\$18,605	\$4,233	\$4,656	\$3,452	\$44,652	\$54,046	\$13,012
Per foot.....	\$4.94	\$5.30	\$4.44	\$2.49	\$2.82	\$1.92	\$11.82	\$12.88	\$5.46
Gas wells.....	\$7,616,208	\$5,086,026	\$2,530,182	\$3,363,521	\$2,331,758	\$1,031,763	\$245,237	\$189,237	\$56,000
Per well.....	\$28,959	\$26,573	\$29,787	\$11,970	\$12,337	\$11,215	\$35,034	\$37,847	\$28,000
Per foot.....	\$6.61	\$6.74	\$6.38	\$3.82	\$4.18	\$3.19	\$11.51	\$12.21	\$9.68
Dry holes.....	\$16,187,124	\$8,456,232	\$7,710,892	\$365,776	\$276,095	\$89,681	\$1,403,123	\$1,196,295	\$206,828
Per well.....	\$13,339	\$13,296	\$13,387	\$5,379	\$5,522	\$4,982	\$53,986	\$54,377	\$51,707
Per foot.....	\$3.73	\$3.75	\$3.71	\$2.27	\$2.35	\$2.03	\$16.27	\$16.54	\$14.88
Cost excluding amount paid contractors, total.....	\$95,064,894	\$39,561,223	\$55,503,671	\$2,344,423	\$1,146,948	\$1,197,475	\$2,206,587	\$1,729,575	\$476,992
Oil wells.....	\$80,894,610	\$35,135,494	\$45,759,118	\$209,216	\$116,021	\$93,195	\$1,536,979	\$1,322,615	\$214,164
Gas wells.....	\$4,587,666	\$2,164,618	\$2,403,050	\$1,997,955	\$983,358	\$1,014,599	\$149,349	\$93,349	\$56,000
Dry holes.....	\$9,582,618	\$2,241,113	\$7,341,505	\$137,252	\$47,571	\$89,681	\$520,239	\$313,411	\$206,828
Cost of drilling, total.....	\$46,482,110	\$12,578,462	\$33,903,648	\$1,002,694	\$261,836	\$740,658	\$1,267,000	\$905,595	\$361,405
Oil wells.....	\$35,637,705	\$9,954,152	\$25,683,553	\$80,947	\$23,635	\$57,312	\$700,197	\$570,814	\$129,383
Gas wells.....	\$2,554,846	\$922,447	\$1,632,599	\$801,192	\$197,971	\$603,221	\$103,179	\$56,778	\$46,400
Dry holes.....	\$6,289,559	\$1,701,863	\$6,587,696	\$120,555	\$40,230	\$80,325	\$463,624	\$278,002	\$185,622
Cost of equipping wells, total.....	\$48,582,784	\$28,982,781	\$21,600,023	\$1,341,729	\$885,112	\$456,617	\$939,587	\$823,980	\$115,587
Oil wells.....	\$45,256,905	\$25,181,342	\$20,075,563	\$128,289	\$92,386	\$35,883	\$838,782	\$752,001	\$64,781
Gas wells.....	\$2,032,820	\$1,262,169	\$770,651	\$1,196,763	\$785,385	\$411,378	\$48,170	\$36,570	\$9,800
Dry holes.....	\$1,293,059	\$539,250	\$753,809	\$16,897	\$7,341	\$9,356	\$56,615	\$35,409	\$21,206
Casing, total.....	\$32,008,089	\$17,699,454	\$14,308,635	\$991,793	\$618,501	\$373,292	\$554,711	\$463,609	\$91,102
Oil wells.....	\$29,331,712	\$16,310,833	\$13,020,879	\$59,357	\$37,923	\$21,434	\$478,814	\$414,718	\$64,096
Gas wells.....	\$1,490,928	\$914,926	\$576,002	\$916,322	\$573,820	\$342,502	\$34,021	\$28,221	\$5,800
Dry holes.....	\$1,185,449	\$473,695	\$711,754	\$16,114	\$6,758	\$9,356	\$41,878	\$20,670	\$21,206
Equipping for flowing and pumping, total.....	\$15,879,175	\$8,945,445	\$6,933,730	\$299,428	\$218,448	\$80,980	\$335,566	\$317,614	\$17,952
Oil wells.....	\$15,245,944	\$8,544,410	\$6,701,534	\$47,024	\$34,795	\$12,229	\$312,139	\$294,787	\$17,352
Gas wells.....	\$529,209	\$338,382	\$190,827	\$252,266	\$183,515	\$66,751	\$8,688	\$8,088	\$800
Dry holes.....	\$104,022	\$62,653	\$41,369	\$138	\$138	.....	\$14,739	\$14,739	.....
Production derricks, total.....	\$695,520	\$337,882	\$357,658	\$50,508	\$48,163	\$2,345	\$49,290	\$42,757	\$6,533
Oil wells.....	\$679,249	\$326,099	\$353,150	\$21,888	\$19,668	\$2,220	\$45,829	\$42,496	\$3,333
Gas wells.....	\$12,683	\$8,861	\$3,822	\$28,175	\$28,050	\$125	\$3,461	\$261	\$3,200
Dry holes.....	\$3,588	\$2,902	\$666	\$445	\$445	.....	.....	.....	.....
Amount paid or due contractors for drilling and equipping wells, total <sup>8</sup> .....	\$56,586,774	\$53,701,893	\$2,886,861	\$1,710,844	\$1,693,680	\$17,164	\$3,147,936	\$3,114,869	\$33,067
Oil wells.....	\$46,975,728	\$44,585,364	\$2,390,362	\$116,754	\$116,754	.....	\$2,169,164	\$2,136,097	\$33,067
Gas wells.....	\$3,028,542	\$2,901,410	\$127,132	\$1,365,566	\$1,348,402	\$17,164	\$95,868	\$95,868	.....
Dry holes.....	\$6,584,506	\$6,215,119	\$369,367	\$226,524	\$226,524	.....	\$882,884	\$882,884	.....

<sup>3</sup>Mississippi, 9 oil wells and 23 dry holes.<sup>4</sup>Nebraska, 1 dry hole.<sup>5</sup>Operators were not requested to report data for wells drilled for flooding or gas-intake purposes. However, 200 such wells with a total footage of 239,302 and drilled and equipped at a cost of \$301,656 were reported for New York; and 372 such wells with a total footage of 592,454 costing \$793,716 were drilled in Pennsylvania. Statistics for these wells are not included in the figures presented in this table. It is believed that some additional wells in New York and Pennsylvania drilled for flooding purposes may have been included in the figures reported for oil, gas, and dry wells.<sup>6</sup>Colorado, 5 oil wells and 13 dry holes.<sup>7</sup>Represents costs borne directly by oil and gas companies (except for wells drilled by them for the account of others) and amounts paid or due contractors including those engaged principally in producing oil and gas. The costs borne directly by oil and gas companies exclude expense items such as taxes, interest, and insurance. The amounts paid or due contractors, however, usually cover all of their expenses and include contractors' profit.<sup>8</sup>Statistics on costs incurred by contractors in drilling and equipping wells on contract are shown in detail in table 36.

TABLE 10.—PRINCIPAL STATISTICS FOR THE CRUDE-PETROLEUM AND NATURAL-GAS

[For producing

ITEM	UNITED STATES				ARKANSAS			
	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only
1 Number of operating companies <sup>2</sup> .....	7,782	5,842	1,254	1,053	129	104	18	7
2 Number of wells producing December 31, 1939, total.....	347,645	198,623	105,568	43,454	2,987	2,009	819	159
3 Oil wells.....	300,179	198,623	101,556	.....	2,809	2,009	800	.....
4 Gas wells.....	47,466	.....	4,012	43,454	178	.....	19	159
5 Quantity of products:								
6 Crude petroleum (barrels).....	1,228,133,816	782,076,824	445,847,078	209,914	20,914,947	14,361,386	6,553,561	.....
7 Natural gas (thousands of cu.ft.), total.....	2,929,184,828	914,333,639	756,536,032	1,258,318,157	19,464,289	12,234,204	3,092,906	4,137,179
8 Marketed.....	2,287,413,256	615,733,193	584,448,605	1,107,231,458	11,323,305	6,887,430	298,945	4,136,930
9 All other production.....	641,771,572	298,600,446	192,088,427	151,084,699	8,140,984	5,348,774	2,793,961	249
"Drip" gasoline (gallons).....	36,066,703	9,752,574	155,537	26,168,592	5,560	5,560	.....	.....
10 Value of products, total.....	\$1,375,953,578	\$828,780,307	\$467,451,889	\$79,741,580	\$17,020,274	\$11,505,837	\$5,121,997	\$392,440
11 Crude petroleum.....	\$1,251,904,665	\$800,757,811	\$450,904,057	\$242,797	\$16,451,592	\$11,347,326	\$5,104,266	.....
12 Marketed natural gas.....	\$115,349,685	\$21,891,265	\$14,832,150	\$78,626,250	\$547,558	\$143,751	\$11,367	\$392,440
13 "Drip" gasoline.....	\$1,179,545	\$434,738	\$5,925	\$738,862	\$290	\$290	.....	.....
14 Other products.....	\$251,350	\$118,653	\$133,918	\$779	\$7,330	\$1,096	\$6,234	.....
15 Amount received or due for services performed for others.....	\$7,268,351	\$5,559,840	\$1,575,639	\$132,872	\$13,504	\$13,374	\$130	.....
16 Number of persons engaged, total.....	4141,592	481,789	448,664	410,939	1,989	1,282	689	18
17 Wage earners (average for the year, including inactive periods).....	105,166	81,078	36,214	7,878	1,722	1,089	621	12
18 Salaried employees.....	430,322	415,687	412,051	42,404	178	110	62	6
19 Proprietors and firm members (not applicable to corporations).....	8,104	4,846	599	659	89	83	6	.....
20 Performing manual labor.....	1,304	683	218	225	28	25	1	.....
21 Principal expenses designated below, total.....	\$533,947,395	\$310,086,133	\$197,705,231	\$26,176,021	\$10,353,583	\$6,860,474	\$3,369,171	\$123,928
22 Wages.....	\$155,170,464	\$87,877,136	\$58,271,435	\$9,221,913	\$2,681,842	\$1,577,644	\$1,080,001	\$3,997
23 Salaries.....	\$78,792,331	\$41,801,901	\$32,275,481	\$4,714,949	\$458,901	\$288,284	\$167,330	\$3,287
24 Supplies and materials.....	\$78,037,445	\$47,741,514	\$28,137,879	\$2,156,052	\$1,729,530	\$1,094,260	\$621,287	\$14,003
25 Fuel.....	\$19,459,824	\$11,183,292	\$7,239,597	\$1,036,935	\$476,918	\$303,399	\$169,863	\$3,656
26 Purchased electric energy.....	\$8,738,897	\$4,784,225	\$1,966,246	\$8,398	\$81,245	\$21,765	\$59,480	.....
27 Contract work.....	\$195,748,434	\$116,898,065	\$69,814,593	\$9,035,778	\$4,945,147	\$3,574,922	\$1,271,230	\$98,995
28 Cost of buildings, machinery, and equipment erected or installed during year, total.....	\$198,185,564	\$127,277,441	\$63,771,383	\$7,116,740	\$3,639,176	\$2,737,602	\$895,815	\$5,759
29 Buildings.....	\$9,588,049	\$5,432,677	\$3,850,991	\$204,381	\$95,856	\$82,246	\$13,610	.....
30 Machinery and equipment, total.....	\$188,577,515	\$121,844,764	\$59,820,392	\$6,912,359	\$3,543,320	\$2,655,356	\$882,205	\$5,759
31 Purchased in new condition.....	\$177,097,893	\$114,096,975	\$59,512,254	\$6,488,684	\$3,233,218	\$2,366,877	\$880,582	\$5,759
32 Purchased in used condition.....	\$11,479,622	\$7,747,789	\$3,308,138	\$423,695	\$310,102	\$288,479	\$21,623	.....
33 Cost of drilling and equipping wells completed in 1939.....	\$400,285,017	\$248,100,625	\$134,863,344	\$17,321,048	\$8,858,154	\$5,877,017	\$2,849,312	\$131,825
34 Footage of wells drilled and completed in 1939, total.....	70,994,466	44,849,380	21,609,005	4,536,101	1,230,448	814,380	394,044	22,024
35 Drilled on contract for reporting companies.....	42,350,177	26,586,133	12,806,462	2,957,582	1,015,593	712,649	280,920	22,024
36 Drilled by reporting companies for own account.....	28,644,289	18,263,247	8,802,543	1,578,519	214,855	101,731	113,124	.....
37 Footage of wells drilled by reporting companies for other concerns.....	1,185,714	901,569	284,145	.....	.....	.....	.....	.....
38 Number of man-hours worked by wage earners, total.....	190,078,212	106,344,489	66,542,478	13,191,245	3,254,732	2,063,284	1,182,457	8,991
39 Operating and maintaining wells.....	151,283,141	85,600,725	54,282,135	11,400,281	3,045,745	1,957,148	1,079,608	8,991
40 Drilling wells and rig building.....	31,337,329	19,609,658	10,170,028	1,608,153	148,085	58,122	89,943	.....
41 Per foot drilled by reporting companies.....	1.05	1.02	1.12	1.02	0.69	0.57	0.80	.....
42 Doing other work.....	7,407,232	3,134,106	4,080,315	162,811	80,922	48,016	12,906	.....
43 Average number of wage earners on active days, total.....	111,801	66,744	36,680	8,377	1,785	1,153	622	10
44 Full-time workers.....	90,368	51,321	33,506	5,541	1,517	957	558	2
45 Part-time workers.....	21,433	15,423	3,174	2,836	268	196	64	8
46 Operating and maintaining wells, total.....	85,163	49,683	28,665	6,815	1,644	1,065	589	10
47 Full-time workers.....	68,088	37,510	26,075	4,481	1,393	886	505	2
48 Part-time workers.....	17,077	12,173	2,590	2,334	251	179	64	8
49 Drilling wells and rig building, total.....	22,288	15,058	5,814	1,396	105	59	46	.....
50 Full-time workers.....	18,438	12,198	5,282	958	92	46	46	.....
51 Part-time workers.....	3,850	2,860	532	438	13	13	.....	.....
52 Doing other work, total.....	4,370	2,003	2,201	166	36	29	7	.....
53 Full-time workers.....	3,864	1,613	2,149	102	32	25	7	.....
54 Part-time workers.....	506	390	52	64	4	4	.....	.....
55 Average hourly earning of wage earners.....	\$0.82	\$0.81	\$0.85	\$0.70	\$0.82	\$0.76	\$0.91	\$0.44
56 Horsepower rating of power equipment.....	3,388,341	2,161,827	1,143,737	80,777	65,068	47,947	17,121	.....
57 Per wage earner.....	32.2	35.4	31.6	10.3	37.8	44.0	27.6	.....
58 Electric energy consumed (thousands of kw.-hrs.), total.....	671,057	465,472	204,385	1,200	8,530	1,529	7,001	.....
59 Purchased.....	614,386	434,034	179,413	939	8,507	1,513	6,984	.....
60 Generated by reporting companies.....	56,671	31,438	24,972	261	23	16	7	.....

See footnotes at end of table.

## CRUDE PETROLEUM AND NATURAL GAS

147

INDUSTRY IN THE UNITED STATES, BY TYPE OF OPERATION AND BY STATE: 1939<sup>1</sup>

operations only]

CALIFORNIA				COLORADO, SOUTH DAKOTA, UTAH, AND WASHINGTON						
Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Colorado, total	South Dakota, Utah, and Washington, total	
959	845	111	8	16	8	3	7	13	34	1
16,657	13,482	3,102	73	244	113	92	39	223	21	2
16,538	13,482	3,058	.....	202	113	89	.....	201	1	3
119	.....	46	73	42	.....	3	39	22	20	4
223,904,320	177,578,821	46,325,499	.....	1,376,958	819,509	557,449	.....	1,375,609	1,349	5
393,819,510	285,445,746	84,208,744	24,187,020	8,489,880	175,115	825,624	7,619,081	2,613,120	5,878,700	6
278,332,737	198,285,514	57,987,784	22,099,459	8,052,070	81,508	562,884	7,407,700	2,221,584	5,830,508	7
117,488,773	89,180,232	28,258,980	2,067,561	437,750	93,609	132,760	211,381	381,553	46,194	8
8,507,369	8,507,369	.....	.....	862,541	.....	.....	862,541	72,801	789,740	9
\$250,424,351	\$197,274,708	\$51,381,366	\$1,788,279	\$1,622,759	\$753,871	\$571,451	\$297,437	\$1,381,229	\$231,530	10
\$229,962,935	\$182,381,370	\$47,581,565	.....	\$1,302,392	\$750,565	\$552,027	.....	\$1,301,043	\$1,349	11
\$18,850,430	\$13,290,665	\$3,797,841	\$1,782,124	\$302,053	\$5,506	\$19,424	\$279,123	\$88,857	\$213,398	12
\$389,298	\$389,298	.....	.....	\$18,314	.....	.....	\$18,314	\$1,589	\$18,785	13
\$9,274	\$9,274	.....	.....	.....	.....	.....	.....	.....	.....	14
\$1,212,414	\$1,204,099	\$2,180	\$8,155	.....	.....	.....	.....	.....	.....	15
19,951	14,868	5,004	79	305	87	172	46	289	36	16
15,172	11,492	3,638	42	126	40	59	37	115	21	17
4,373	3,010	1,328	37	162	44	112	6	147	15	18
406	366	40	.....	7	3	1	3	7	.....	19
117	102	15	.....	.....	.....	.....	.....	.....	.....	20
\$80,029,098	\$60,508,877	\$18,874,151	\$646,070	\$1,059,258	\$219,813	\$758,670	\$80,775	\$1,000,781	\$58,497	21
\$27,298,602	\$20,325,038	\$6,890,883	\$80,681	\$205,811	\$80,449	\$94,435	\$50,877	\$182,155	\$23,456	22
\$12,050,216	\$8,221,701	\$3,707,845	\$120,870	\$443,131	\$111,888	\$317,597	\$13,646	\$420,975	\$22,158	23
\$15,281,613	\$11,752,604	\$3,444,252	\$84,757	\$68,352	\$18,598	\$58,758	\$11,193	\$53,562	\$5,000	24
\$3,620,345	\$2,847,611	\$753,967	\$18,847	\$29,390	\$5,968	\$17,166	\$5,256	\$27,742	\$1,648	25
\$2,455,876	\$1,948,847	\$508,346	\$685	\$2,581	.....	\$2,361	.....	\$2,361	.....	26
\$19,324,444	\$15,413,076	\$3,571,138	\$340,230	\$510,413	\$22,110	\$288,305	.....	\$304,176	\$6,237	27
\$33,664,289	\$26,582,258	\$6,944,394	\$137,637	\$170,324	\$14,480	\$68,798	\$87,046	\$119,618	\$50,708	28
\$2,143,785	\$1,821,379	\$309,275	\$13,131	\$1,510	.....	\$1,510	.....	\$1,510	.....	29
\$31,520,504	\$24,780,879	\$6,635,119	\$124,508	\$168,814	\$14,480	\$87,288	\$87,046	\$118,108	\$50,708	30
\$30,766,155	\$24,030,124	\$6,618,525	\$117,508	\$161,727	\$7,393	\$87,288	\$87,046	\$111,021	\$50,708	31
\$754,349	\$730,755	\$18,594	\$7,000	\$7,087	\$7,087	.....	.....	\$7,087	.....	32
\$64,687,413	\$50,722,354	\$13,555,869	\$409,190	\$699,508	\$17,709	\$681,799	.....	\$699,508	.....	33
5,390,892	4,176,800	1,171,242	43,050	46,381	15,943	30,438	.....	46,381	.....	34
1,611,224	1,353,728	232,236	25,282	44,036	14,458	29,578	.....	44,036	.....	35
3,779,668	2,822,874	939,008	17,788	2,345	1,485	880	.....	2,345	.....	36
22,937	22,937	.....	.....	.....	.....	.....	.....	.....	.....	37
27,922,721	20,902,425	6,928,790	91,508	248,184	70,988	117,155	58,061	219,635	26,549	38
16,859,653	13,255,109	3,571,695	32,849	239,063	69,905	113,169	55,989	215,033	24,330	39
8,246,388	6,201,007	1,988,724	58,657	8,874	816	3,986	52,072	4,602	52,072	40
2.17	2.18	2.12	3.30	2.85	0.41	4.63	(5)	1.96	(5)	41
2,816,680	1,446,309	1,370,371	.....	447	447	.....	.....	.....	447	42
16,738	13,037	3,645	56	157	50	60	47	120	37	43
14,674	11,105	3,526	43	122	35	58	29	103	19	44
2,064	1,952	119	13	35	15	2	18	17	18	45
9,487	7,565	1,893	19	135	40	56	37	116	19	46
8,013	6,194	1,807	12	110	35	56	19	101	9	47
1,454	1,371	76	7	25	5	2	16	15	10	48
5,667	4,596	1,034	14	14	2	2	10	4	10	49
5,102	4,078	993	31	12	.....	2	10	2	10	50
565	518	41	6	2	2	.....	.....	2	.....	51
1,604	878	728	.....	8	8	.....	.....	.....	8	52
1,559	833	726	.....	.....	.....	.....	.....	.....	.....	53
45	43	2	.....	8	8	.....	.....	.....	8	54
\$0.98	\$0.97	\$0.99	\$0.88	\$0.84	\$0.85	\$0.81	\$0.87	\$0.83	\$0.88	55
701,482	561,242	139,428	812	6,154	1,955	3,082	1,137	5,771	383	56
46.2	48.8	3873	19.3	45.3	48.9	51.9	30.7	50.2	18.2	57
238,236	189,530	49,689	17	72	10	62	.....	72	.....	58
233,454	183,789	49,668	17	49	.....	49	.....	49	.....	59
5,782	5,781	21	.....	23	10	13	.....	23	.....	60

## MINERAL INDUSTRIES

TABLE 10.—PRINCIPAL STATISTICS FOR THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY

[For production]

ITEM	ILLINOIS				INDIANA			
	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only
1 Number of operating companies <sup>2</sup> .....	277	243	31	3	75	43	14	19
2 Number of wells producing December 31, 1939, total.....	16,981	7,276	9,690	15	1,865	674	699	512
3 Oil wells.....	18,935	7,276	9,658	.....	1,194	674	520	.....
4 Gas wells.....	46	.....	31	15	691	.....	179	512
5 Quantity of products:								
6 Crude petroleum (barrels).....	93,593,753	71,777,879	21,818,074	.....	1,644,555	1,126,507	518,048	.....
7 Natural gas (thousands of cu.ft.), total.....	8,980,061	5,643,349	2,942,491	394,221	1,331,399	414,597	228,532	688,270
8 Marketed.....	2,800,376	2,059,010	347,145	394,221	704,591	19,580	15,612	669,399
9 All other production.....	6,179,685	3,584,339	2,595,346	.....	626,808	395,017	212,920	18,871
10 "Drip" gasoline (gallons).....	27,717	27,717	.....	.....	380	.....	380	.....
11 Value of products, total.....	\$96,618,028	\$73,264,825	\$23,316,142	\$37,061	\$1,694,195	\$1,070,138	\$512,164	\$111,893
12 Crude petroleum.....	\$95,972,110	\$72,740,827	\$23,231,283	.....	\$1,568,580	\$1,059,582	\$508,998	.....
13 Marketed natural gas.....	\$83,969	\$38,212	\$10,896	\$37,061	\$114,963	\$1,958	\$1,762	\$111,243
14 "Drip" gasoline.....	\$2,221	\$2,221	.....	.....	\$22	.....	\$22	.....
15 Other products.....	\$9,672	\$316	\$9,556	.....	\$1,382	.....	\$1,382	.....
16 Amount received or due for services performed for others.....	\$549,856	\$465,249	\$64,607	.....	\$9,248	\$8,598	.....	\$650
17 Number of persons engaged, total.....	6,653	3,712	2,932	9	600	341	187	72
18 Wage earners (average for the year, including inactive periods).....	5,329	2,611	2,716	2	418	224	143	51
19 Salaried employees.....	1,108	894	207	7	147	90	37	20
20 Proprietors and firm members (not applicable to corporations).....	216	207	9	.....	35	27	7	1
21 Performing manual labor.....	25	19	6	.....	9	5	4	.....
22 Principal expenses designated below, total.....	\$36,367,815	\$27,121,636	\$9,224,454	\$41,725	\$1,999,888	\$1,542,313	\$354,568	\$102,987
23 Wages.....	\$8,031,009	\$3,903,479	\$4,126,147	\$1,583	\$465,428	\$273,010	\$159,988	\$33,430
24 Salaries.....	\$2,334,884	\$1,907,109	\$406,185	\$22,690	\$349,552	\$207,724	\$117,319	\$24,509
25 Supplies and materials.....	\$3,608,171	\$2,369,284	\$1,239,588	\$321	\$143,707	\$97,231	\$59,199	\$7,277
26 Fuel.....	\$485,437	\$319,289	\$166,188	.....	\$48,469	\$38,245	\$8,041	\$2,183
27 Purchased electric energy.....	\$147,548	\$140,284	\$7,262	.....	\$3,474	.....	.....	.....
28 Contract work.....	\$21,779,768	\$18,482,231	\$3,280,108	\$17,431	\$991,260	\$922,629	\$33,043	\$35,588
29 Cost of buildings, machinery, and equipment erected or installed during year, total.....	\$15,896,821	\$13,867,582	\$2,226,399	\$2,840	\$630,040	\$562,171	\$53,000	\$14,869
30 Buildings.....	\$920,502	\$827,530	\$292,972	.....	\$19,670	\$16,655	\$3,000	\$15
31 Machinery and equipment, total.....	\$14,976,319	\$13,040,052	\$1,933,427	\$2,840	\$610,370	\$545,516	\$50,000	\$14,854
32 Purchased in new condition.....	\$14,683,289	\$12,779,893	\$1,882,996	\$400	\$563,919	\$524,085	\$25,000	\$14,854
33 Purchased in used condition.....	\$313,030	\$260,159	\$50,431	\$2,440	\$46,451	\$21,451	\$25,000	.....
34 Cost of drilling and equipping wells completed in 1939.....	\$33,819,675	\$27,889,302	\$6,102,412	\$27,361	\$1,856,225	\$1,664,866	\$128,054	\$63,305
35 Footage of wells drilled and completed in 1939, total.....	6,254,717	5,098,456	1,144,336	11,925	377,043	317,701	28,103	31,239
36 Drilled on contract for reporting companies.....	4,631,076	3,820,846	798,305	11,925	258,221	223,306	8,950	25,065
37 Drilled by reporting companies for own account.....	1,623,641	1,277,610	346,031	.....	118,822	94,395	19,153	5,274
38 Footage of wells drilled by reporting companies for other concerns.....	129,143	129,143	.....	.....	5,342	5,342	.....	.....
39 Number of man-hours worked by wage earners, total.....	10,362,696	4,860,658	5,499,429	2,609	699,879	379,980	257,955	61,984
40 Operating and maintaining wells.....	8,331,449	3,735,095	4,593,745	2,609	570,360	277,211	242,825	50,324
41 Drilling wells and rig building.....	1,349,449	975,014	374,435	.....	118,179	91,409	15,130	11,640
42 Per foot drilled by reporting companies.....	0.77	0.69	1.08	.....	0.95	0.92	0.79	2.21
43 Doing other work.....	681,798	150,549	531,249	.....	11,340	11,340	.....	.....
44 Average number of wage earners on active days, total.....	5,650	2,920	2,728	2	481	282	142	57
45 Full-time workers.....	4,965	2,397	2,568	.....	350	208	112	30
46 Part-time workers.....	695	533	160	2	131	74	30	27
47 Operating and maintaining wells, total.....	4,383	2,098	2,283	2	352	173	134	45
48 Full-time workers.....	3,873	1,747	2,126	.....	250	126	104	20
49 Part-time workers.....	510	351	157	2	102	47	30	25
50 Drilling wells and rig building, total.....	927	737	190	.....	120	100	8	12
51 Full-time workers.....	757	570	187	.....	93	75	8	10
52 Part-time workers.....	170	167	3	.....	27	25	.....	2
53 Doing other work, total.....	340	85	255	.....	9	9	.....	.....
54 Full-time workers.....	325	70	255	.....	7	7	.....	.....
55 Part-time workers.....	15	15	.....	.....	2	2	.....	.....
56 Average hourly earning of wage earners.....	\$0.77	\$0.80	\$0.75	\$0.53	\$0.66	\$0.72	\$0.62	\$0.54
57 Horsepower rating of power equipment.....	95,460	52,229	43,231	.....	8,317	5,806	2,566	145
58 Per wage earner.....	17.9	20.0	15.9	.....	19.9	25.0	17.9	2.8
59 Electric energy consumed (thousands of kw.-hrs), total.....	12,664	12,175	489	.....	157	157	.....	.....
60 Purchased.....	8,743	8,543	200	.....	157	157	.....	.....
Generated by reporting companies.....	3,921	3,632	289	.....	.....	.....	.....	.....

See footnotes at end of table.



## CRUDE PETROLEUM AND NATURAL GAS

149

IN THE UNITED STATES, BY TYPE OF OPERATION AND BY STATE: 1939<sup>1</sup>—Continued  
operations only]

KANSAS AND MISSOURI						KENTUCKY AND TENNESSEE					
Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Kansas, total	Missouri, total	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Kentucky, total	Tennessee, total
552	408	95	74	546	7	104	51	31	26	96	8
20,370	11,919	7,090	1,361	20,238	132	9,909	3,323	4,788	1,798	9,868	41
18,619	11,919	6,700	.....	18,555	64	7,831	3,323	4,508	.....	7,793	38
1,751	.....	390	1,361	1,683	68	2,078	.....	280	1,798	2,075	3
57,351,376	29,759,968	27,578,714	12,694	57,324,967	28,409	4,252,411	1,998,048	2,248,203	6,160	4,208,549	43,862
84,358,112	9,948,023	28,860,757	45,551,332	83,980,332	397,780	40,680,053	386,644	4,467,023	35,806,366	40,627,597	32,456
78,416,364	7,405,404	25,676,193	45,334,767	78,080,184	336,180	35,131,832	77,462	1,370,413	33,683,757	35,123,251	8,281
5,941,748	2,540,619	3,184,564	218,565	5,880,148	61,600	5,588,421	309,182	3,096,810	2,122,629	5,504,248	24,175
1,895,449	2,280	.....	1,893,169	1,895,449	.....	84,000	.....	84,000	.....	84,000	.....
\$63,077,583	\$30,773,278	\$29,685,966	\$2,618,319	\$63,018,725	\$58,858	\$9,432,696	\$2,101,323	\$2,523,261	\$4,808,228	\$9,388,020	\$44,878
\$59,254,502	\$30,314,441	\$28,927,574	\$12,487	\$59,233,599	\$21,103	\$4,400,609	\$2,038,571	\$2,355,542	\$6,496	\$4,356,630	\$43,979
\$3,479,693	\$229,208	\$697,506	\$2,552,979	\$3,443,591	\$38,102	\$4,967,291	\$5,502	\$161,855	\$4,800,134	\$4,966,629	\$662
\$49,594	\$114	.....	\$49,280	\$49,394	.....	\$4,200	.....	\$4,300	.....	\$4,200	.....
\$9,378	\$1,219	\$7,500	\$659	\$9,378	.....	\$4,611	\$4,611	.....	.....	\$4,611	.....
\$284,616	\$228,296	\$53,406	\$2,914	\$282,983	\$1,653	\$56,187	\$52,705	\$1,884	\$1,598	\$55,950	\$237
8,282	4,595	3,430	257	7,680	602	1,649	562	589	498	1,617	32
6,166	3,583	2,417	166	6,155	11	1,453	465	549	439	1,426	27
1,702	879	971	52	1,119	583	156	71	31	54	151	5
414	333	42	39	406	8	40	26	9	5	40	.....
88	49	14	25	83	5	7	2	4	1	7	.....
\$29,094,446	\$14,556,921	\$13,731,101	\$806,424	\$27,550,321	\$1,544,125	\$3,090,466	\$1,354,942	\$1,053,707	\$681,817	\$3,039,581	\$50,865
\$7,815,208	\$4,183,471	\$3,554,164	\$167,573	\$7,902,017	\$13,191	\$1,268,411	\$452,034	\$533,070	\$283,307	\$1,246,270	\$22,141
\$4,065,039	\$1,591,950	\$2,388,424	\$84,685	\$2,564,566	\$1,500,473	\$336,753	\$184,422	\$67,597	\$104,734	\$330,317	\$6,438
\$3,592,539	\$1,997,715	\$1,541,206	\$53,618	\$3,591,447	\$1,092	\$476,031	\$202,249	\$232,465	\$41,317	\$472,413	\$3,618
\$691,615	\$418,813	\$260,182	\$12,520	\$688,203	\$3,312	\$106,431	\$46,258	\$50,817	\$9,358	\$105,761	\$870
\$555,242	\$313,265	\$241,463	\$514	\$554,603	\$639	\$138	\$54	\$60	\$22	\$136	.....
\$12,274,903	\$6,041,707	\$5,745,662	\$487,534	\$12,249,485	\$25,418	\$902,704	\$489,927	\$169,698	\$243,079	\$884,698	\$18,020
\$9,774,483	\$4,736,321	\$4,783,261	\$254,901	\$9,771,866	\$2,617	\$774,728	\$273,237	\$163,229	\$338,262	\$770,812	\$3,916
\$674,186	\$232,115	\$429,903	\$12,188	\$674,186	.....	\$91,620	\$24,733	\$19,596	\$47,291	\$91,620	.....
\$9,100,297	\$4,504,206	\$4,353,368	\$242,733	\$9,097,680	\$2,617	\$683,108	\$248,504	\$143,633	\$290,971	\$679,192	\$3,916
\$8,056,188	\$4,086,828	\$3,735,185	\$224,175	\$8,054,044	\$2,144	\$580,635	\$180,620	\$109,744	\$290,271	\$579,135	\$1,500
\$1,044,109	\$407,378	\$818,173	\$18,558	\$1,043,636	\$473	\$102,473	\$67,884	\$33,869	\$700	\$100,057	\$2,416
\$22,480,373	\$11,424,572	\$10,361,322	\$694,479	\$22,444,955	\$35,418	\$1,821,272	\$654,225	\$339,057	\$627,990	\$1,797,210	\$24,062
4,555,213	2,336,501	2,040,354	178,358	4,530,548	24,665	491,747	220,558	95,907	175,282	462,519	9,228
3,505,154	1,714,031	1,660,768	130,355	3,487,799	17,355	284,841	113,277	66,328	105,236	277,383	7,458
1,050,059	622,470	379,588	48,003	1,042,749	7,310	206,906	107,281	29,579	70,046	205,136	1,770
49,938	41,013	8,925	.....	47,478	2,460	16,500	16,500	.....	.....	16,500	.....
10,379,823	5,771,214	4,368,636	239,973	10,362,855	16,868	2,143,937	773,724	877,568	492,645	2,100,240	43,697
9,317,182	5,079,815	4,041,378	195,991	9,308,714	10,468	1,808,754	649,142	827,965	331,847	1,787,411	41,343
963,567	645,760	273,625	43,982	956,967	6,400	325,305	114,808	49,499	160,998	322,951	2,354
0.88	0.97	0.70	0.92	0.88	0.66	1.46	0.93	1.67	2.30	1.46	1.33
99,274	46,639	53,635	.....	99,274	.....	9,878	9,774	104	.....	9,878	.....
6,604	3,946	2,443	215	6,593	11	1,533	516	569	448	1,508	27
4,903	2,669	2,135	99	4,894	9	969	360	443	166	946	23
1,701	1,277	308	116	1,699	7	554	156	126	282	580	4
5,618	3,229	2,246	143	5,611	2	1,213	400	513	300	1,189	24
4,187	2,142	1,977	68	4,182	5	792	285	409	98	772	20
1,431	1,067	269	75	1,429	2	421	115	104	202	417	4
896	656	168	72	892	4	306	103	55	148	303	3
662	502	129	31	658	.....	169	67	34	68	168	3
234	154	99	41	234	.....	137	36	21	60	137	.....
90	61	29	.....	90	.....	14	13	1	.....	14	.....
54	25	29	.....	54	.....	8	8	.....	.....	8	.....
36	36	.....	.....	36	.....	6	5	1	.....	6	.....
\$0.76	\$0.73	\$0.81	\$0.70	\$0.76	\$0.78	\$0.59	\$0.58	\$0.61	\$0.58	\$0.59	\$0.51
267,804	130,255	135,395	2,154	267,172	632	23,222	13,034	9,268	920	22,819	403
43.4	36.4	36.0	13.0	43.4	57.5	16.0	28.0	16.9	2.1	16.0	14.9
45,762	23,405	22,348	9	45,746	16	35	17	8	10	35	.....
43,628	23,130	20,689	9	43,612	16	2	1	1	.....	2	.....
1,934	275	1,659	.....	1,934	.....	33	16	7	10	33	.....

TABLE 10.—PRINCIPAL STATISTICS FOR THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY

[For producing

ITEM	LOUISIANA AND MISSISSIPPI					
	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Louisiana, total	Mississippi, total
1 Number of operating companies <sup>a</sup> .....	427	263	114	60	411	19
2 Number of wells producing December 31, 1939, total.....	6,578	2,393	2,785	1,398	6,529	47
3 Oil wells.....	5,055	2,393	2,682	.....	5,046	9
4 Gas wells.....	1,521	.....	123	1,398	1,483	38
5 Quantity of products:						
6 Crude petroleum (barrels).....	92,158,732	43,937,097	48,216,849	4,786	92,058,755	101,977
7 Natural gas (thousands of cu. ft.), total.....	392,788,274	104,820,700	73,600,580	214,568,994	378,366,004	14,422,270
8 Marketed.....	319,587,130	89,666,090	39,976,166	209,944,874	305,210,547	14,376,583
9 All other production.....	73,201,144	34,954,810	33,624,414	4,622,180	73,155,457	45,687
10 "Drip" gasoline (gallons).....	4,141,621	.....	.....	4,141,621	4,141,621	.....
11 Value of products, total.....	\$107,375,761	\$46,892,147	\$51,566,566	\$8,917,048	\$106,663,688	\$712,093
12 Crude petroleum.....	\$95,582,289	\$44,867,431	\$50,699,023	\$4,835	\$95,470,346	\$91,943
13 Marketed natural gas.....	\$11,282,732	\$1,656,807	\$843,431	\$8,782,494	\$10,662,582	\$620,160
14 "Drip" gasoline.....	\$128,362	.....	.....	\$128,362	\$128,362	.....
15 Other products.....	\$26,470	\$1,429	\$25,041	.....	\$26,470	.....
16 Amount received or due for services performed for others.....	\$375,908	\$366,480	\$8,071	\$1,357	\$375,908	.....
17 Number of persons engaged, total.....	9,737	4,146	5,244	347	9,677	60
18 Wage earners (average for the year, including inactive periods).....	7,959	3,386	4,296	277	7,918	41
19 Salaried employees.....	1,574	575	941	58	1,556	18
20 Proprietors and firm members (not applicable to corporations).....	204	185	7	12	203	1
21 Performing manual labor.....	38	34	1	3	38	.....
22 Principal expenses designated below, total..	\$55,396,378	\$22,502,849	\$31,604,476	\$1,289,053	\$55,001,926	\$394,452
23 Wages.....	\$12,979,760	\$5,010,387	\$7,557,846	\$411,527	\$12,920,776	\$58,984
24 Salaries.....	\$4,063,849	\$1,428,487	\$2,491,733	\$143,649	\$4,032,617	\$31,232
25 Supplies and materials.....	\$9,060,713	\$3,405,822	\$5,558,189	\$96,702	\$9,003,610	\$57,103
26 Fuel.....	\$2,669,963	\$1,143,140	\$1,616,191	\$11,632	\$2,625,459	\$44,504
27 Purchased electric energy.....	\$228,289	\$123,200	\$105,089	.....	\$228,232	\$57
28 Contract work.....	\$26,393,824	\$11,391,833	\$14,376,448	\$625,543	\$26,191,232	\$202,692
29 Cost of buildings, machinery, and equipment erected or installed during year, total....	\$23,305,115	\$9,485,369	\$12,883,058	\$936,688	\$23,161,863	\$143,252
30 Buildings.....	\$674,331	\$275,361	\$398,770	\$2,200	\$671,806	\$2,425
31 Machinery and equipment, total.....	\$22,630,784	\$9,210,008	\$12,486,288	\$934,488	\$22,469,957	\$140,827
32 Purchased in new condition.....	\$22,200,623	\$8,946,141	\$12,325,797	\$928,685	\$22,071,338	\$129,285
33 Purchased in used condition.....	\$430,161	\$263,867	\$160,491	\$5,803	\$418,619	\$11,542
34 Cost of drilling and equipping wells completed in 1939.....	\$50,837,876	\$25,447,659	\$24,363,442	\$1,026,775	\$50,336,818	\$501,058
35 Footage of wells drilled and completed in 1939, total.....	6,166,161	3,346,857	2,645,122	174,182	6,089,919	76,242
36 Drilled on contract for reporting companies	3,081,773	2,034,645	898,229	148,899	3,042,290	39,483
37 Drilled by reporting companies for own account.....	3,084,388	1,312,212	1,746,893	25,283	3,047,629	36,759
38 Footage of wells drilled by reporting companies for other concerns.....	7,848	7,848	.....	.....	7,848	.....
39 Number of man-hours worked by wage earners, total.....	15,273,456	6,359,314	8,394,958	519,184	15,206,868	66,568
40 Operating and maintaining wells.....	9,961,281	4,133,286	5,354,095	473,900	9,948,513	12,768
41 Drilling wells and rig building.....	4,467,574	1,863,690	2,558,400	45,284	4,417,413	50,161
42 Per foot drilled by reporting companies	1.44	1.41	1.46	1.79	1.45	1.36
43 Doing other work.....	844,601	362,138	482,463	.....	840,942	3,659
44 Average number of wage earners on active days, total.....	8,513	3,652	4,344	317	8,405	108
45 Full-time workers.....	7,482	2,998	4,237	247	7,413	69
46 Part-time workers.....	1,031	654	107	70	992	39
47 Operating and maintaining wells, total..	5,429	2,407	2,768	254	5,413	16
48 Full-time workers.....	4,661	1,809	2,872	200	4,670	11
49 Part-time workers.....	748	598	96	54	743	5
50 Drilling wells and rig building, total..	2,653	1,254	1,336	63	2,673	80
51 Full-time workers.....	2,405	1,027	1,331	47	2,347	56
52 Part-time workers.....	248	227	5	16	226	22
53 Doing other work, total.....	431	191	240	.....	419	12
54 Full-time workers.....	396	182	234	.....	396	.....
55 Part-time workers.....	35	29	6	.....	23	12
56 Average hourly earning of wage earners.....	\$0.85	\$0.79	\$0.90	\$0.79	\$0.85	\$0.89
57 Horsepower rating of power equipment.....	218,434	70,985	144,394	1,085	215,074	1,360
58 Per wage earner.....	27.2	21.0	33.6	3.9	27.2	33.2
59 Electric energy consumed (thousands of kw.-hrs.), total.....	20,202	8,710	11,492	.....	20,201	1
60 Purchased.....	14,736	8,120	8,616	.....	14,735	1
Generated by reporting companies.....	5,466	590	4,876	.....	5,466	.....

See footnotes at end of table.

IN THE UNITED STATES, BY TYPE OF OPERATION AND BY STATE: 1939<sup>1</sup>—Continued  
operations only]

MICHIGAN				MONTANA				NEW MEXICO				
Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	
328	238	49	52	170	130	30	12	142	101	32	12	1
3,002	2,055	604	343	2,087	1,133	575	359	2,981	1,317	1,614	50	2
2,610	2,055	555	.....	1,637	1,133	504	.....	2,878	1,317	1,559	.....	3
392	.....	49	343	430	.....	71	359	105	.....	55	50	4
23,282,258	17,831,739	5,448,609	1,910	5,843,735	3,097,587	2,745,469	699	37,575,278	18,874,862	20,698,081	2,355	5
12,712,290	1,954,478	2,969,772	7,788,040	26,685,888	1,883,870	3,879,550	20,922,468	10,868,603	27,631,986	68,980,821	8,249,796	6
9,516,445	177,797	1,378,935	7,759,713	24,321,831	814,008	3,115,978	20,591,849	83,355,842	22,338,241	52,789,805	8,249,796	7
3,395,845	1,776,681	1,590,827	28,327	2,364,057	1,289,864	763,574	330,619	22,508,781	5,285,745	17,211,018	.....	8
.....	.....	.....	.....	.....	.....	.....	.....	64,149	43,147	21,002	.....	9
\$22,383,523	\$16,181,789	\$5,100,970	\$1,120,764	\$6,838,678	\$2,968,208	\$2,954,944	\$915,528	\$32,070,595	\$13,871,984	\$17,946,245	\$252,366	10
\$20,808,947	\$15,781,978	\$5,025,734	\$1,235	\$5,679,091	\$2,916,824	\$2,761,813	\$454	\$30,564,708	\$13,619,282	\$16,943,375	\$2,049	11
\$1,208,957	\$18,982	\$71,238	\$1,118,789	\$1,130,840	\$30,108	\$185,710	\$915,082	\$1,434,445	\$208,833	\$997,822	\$227,786	12
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13
\$383	\$383	.....	.....	\$1,821	\$753	\$468	.....	\$32,590	\$20,817	\$1,973	.....	14
\$365,236	\$380,446	\$4,000	\$790	\$27,526	\$20,521	\$8,953	\$52	\$38,492	\$13,053	\$2,908	\$22,531	15
2,847	2,085	689	93	938	581	302	75	1,775	1,042	718	15	16
2,117	1,536	528	55	630	382	229	39	1,435	839	586	10	17
497	364	112	21	208	110	63	35	265	147	118	.....	18
233	185	31	17	100	89	10	1	75	56	14	5	19
22	19	3	.....	38	36	2	.....	21	11	7	3	20
\$8,425,328	\$6,325,962	\$1,821,432	\$278,032	\$2,122,821	\$1,015,492	\$980,186	\$147,143	\$12,313,498	\$5,874,711	\$6,315,057	\$123,730	21
\$2,746,401	\$1,829,070	\$748,594	\$88,737	\$904,566	\$474,103	\$378,788	\$51,485	\$2,447,132	\$1,408,679	\$1,024,407	\$14,048	22
\$997,029	\$703,294	\$255,363	\$38,372	\$298,155	\$117,580	\$131,775	\$48,800	\$631,823	\$323,232	\$308,381	.....	23
\$1,038,787	\$786,910	\$220,549	\$21,328	\$354,369	\$193,338	\$140,362	\$20,669	\$1,501,616	\$1,044,418	\$438,080	\$19,113	24
\$486,528	\$282,759	\$216,193	\$7,574	\$131,859	\$65,087	\$65,183	\$1,809	\$281,036	\$219,215	\$1,635	\$538	25
\$33,011	\$31,034	\$1,974	\$3	\$15,918	\$12,569	\$3,349	.....	\$18,333	\$8,359	\$9,994	.....	26
\$3,123,572	\$2,612,795	\$368,759	\$142,018	\$418,184	\$152,835	\$240,749	\$24,580	\$7,433,768	\$2,870,828	\$4,472,902	\$90,088	27
\$3,237,927	\$2,952,652	\$220,716	\$84,559	\$1,120,853	\$642,355	\$393,311	\$65,187	\$5,289,868	\$2,644,291	\$2,623,591	\$21,978	28
\$144,642	\$59,521	\$84,007	\$1,014	\$48,302	\$35,798	\$9,981	\$525	\$612,178	\$211,706	\$400,255	\$217	29
\$3,083,585	\$2,893,131	\$136,709	\$53,545	\$1,074,551	\$608,559	\$383,330	\$84,662	\$4,877,680	\$2,432,565	\$2,223,338	\$21,759	30
\$2,487,082	\$2,299,571	\$135,209	\$52,202	\$914,154	\$453,157	\$378,335	\$84,662	\$4,513,128	\$2,312,719	\$2,180,207	\$20,200	31
\$606,303	\$593,580	\$1,400	\$11,343	\$160,397	\$153,402	\$6,995	.....	\$184,554	\$119,868	\$43,129	\$1,559	32
\$7,981,304	\$6,893,620	\$848,501	\$239,183	\$1,421,031	\$657,150	\$665,659	\$98,222	\$14,163,929	\$7,021,243	\$7,001,792	\$140,894	33
2,205,690	1,907,295	225,609	72,786	309,836	144,907	140,678	24,253	2,188,627	1,208,703	980,922	19,002	34
1,367,682	1,184,040	157,458	36,186	117,820	58,607	65,919	13,294	1,390,831	588,450	805,069	17,112	35
848,008	743,255	68,153	38,800	192,016	106,300	74,757	10,959	797,996	640,253	155,653	1,890	36
128,184	128,184	.....	.....	1,600	1,600	.....	.....	3,765	3,765	.....	.....	37
3,799,026	2,712,008	987,810	99,208	1,175,612	623,550	480,617	71,445	2,757,495	1,581,638	1,158,442	17,415	38
2,814,103	2,050,839	804,725	58,540	924,784	483,775	386,472	54,517	1,867,249	852,523	1,005,335	9,391	39
749,447	594,858	128,581	28,050	243,600	135,303	92,297	16,000	814,877	670,905	136,748	7,224	40
0.77	0.68	1.88	0.77	1.28	1.25	1.23	1.46	1.02	1.04	0.88	3.82	41
135,476	66,354	56,524	12,618	7,248	4,472	1,848	928	75,369	58,210	18,359	800	42
2,297	1,709	525	63	788	427	280	41	1,575	958	593	24	43
1,659	1,142	486	51	501	287	187	27	1,400	816	586	16	44
638	567	59	12	227	140	73	14	175	140	27	8	45
1,695	1,225	428	42	522	302	189	31	1,007	496	505	6	46
1,238	828	378	30	381	189	153	19	873	392	478	3	47
459	397	50	12	181	113	36	12	134	104	27	3	48
528	442	70	16	199	121	70	8	518	425	78	13	49
266	289	61	16	138	97	33	8	486	395	78	13	50
162	153	9	.....	61	24	37	.....	30	30	.....	.....	51
74	42	27	5	7	4	1	2	52	37	10	5	52
57	25	27	5	2	1	1	.....	41	31	10	.....	53
17	17	.....	.....	5	3	.....	2	11	6	.....	5	54
\$0.72	\$0.71	\$0.76	\$0.69	\$0.77	\$0.76	\$0.79	\$0.72	\$0.89	\$0.89	\$0.88	\$0.81	55
47,127	34,728	12,384	35	20,242	15,535	4,407	300	30,225	18,132	14,093	.....	56
22.3	22.6	23.5	0.6	32.1	42.9	19.2	7.7	21.1	19.2	24.0	.....	57
3,871	2,127	1,743	1	751	589	182	.....	1,532	305	1,227	.....	58
2,074	2,038	37	1	744	588	178	.....	860	216	444	.....	59
1,797	91	1,706	.....	7	3	4	.....	872	89	783	.....	60

## MINERAL INDUSTRIES

TABLE 10.—PRINCIPAL STATISTICS FOR THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY  
[For producing]

ITEM	NEW YORK				OHIO			
	Total	Oil-well operations only	Oil and gas-well operations	Gas-well operations only	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only
1 Number of operating companies <sup>2</sup> .....	190	147	19	28	227	98	51	114
2 Number of wells producing December 31, 1939, total.....	14,729	10,593	2,254	1,882	15,011	7,586	2,859	4,566
3 Oil wells.....	12,837	10,593	2,244	.....	10,250	7,586	2,664	.....
4 Gas wells.....	1,892	.....	10	1,882	4,761	.....	195	4,566
5 Quantity of products:								
6 Crude petroleum (barrels).....	3,898,376	3,153,727	742,174	2,475	2,030,418	1,497,166	527,389	5,863
7 Natural gas (thousands of cu. ft.), total	31,328,337	890,985	377,550	30,059,802	37,751,944	1,222,874	1,978,687	34,550,403
8 Marketed.....	29,119,526	6,888	125,955	28,966,883	34,000,173	879,383	1,068,036	32,052,774
9 All other production.....	2,208,811	884,097	251,595	1,073,119	3,751,771	343,511	910,831	2,497,629
10 "Drip" gasoline (gallons).....	.....	.....	.....	.....	75	.....	.....	75
11 Value of products, total.....	\$12,083,589	\$6,511,216	\$1,545,017	\$4,027,356	\$9,421,588	\$1,979,792	\$808,130	\$6,633,686
12 Crude petroleum.....	\$8,018,025	\$6,489,269	\$1,528,783	\$4,993	\$2,470,818	\$1,820,804	\$841,539	\$6,475
13 Marketed natural gas.....	\$4,040,486	\$1,433	\$18,254	\$4,020,779	\$8,925,210	\$150,951	\$164,647	\$6,609,612
14 "Drip" gasoline.....	.....	.....	.....	.....	\$5	.....	.....	\$5
15 Other products.....	\$153	\$153	.....	.....	\$170	.....	\$170	.....
16 Amount received or due for services performed for others.....	\$24,945	\$23,361	.....	\$1,584	\$25,385	\$8,037	\$1,774	\$15,574
17 Number of persons engaged, total.....	1,955	1,243	244	468	2,597	903	662	1,032
18 Wage earners (average for the year, including inactive periods).....	1,358	825	140	393	1,685	754	239	692
19 Salaried employees.....	303	136	94	73	713	82	383	248
20 Proprietors and firm members (not applicable to corporations).....	294	282	10	2	199	67	40	92
21 Performing manual labor.....	69	63	5	1	51	24	16	41
22 Principal expenses designated below, total	\$4,869,688	\$2,871,494	\$689,468	\$1,308,726	\$4,990,024	\$1,393,844	\$1,214,994	\$2,381,386
23 Wages.....	\$1,722,486	\$1,020,366	\$188,825	\$513,295	\$1,958,357	\$792,890	\$271,785	\$693,682
24 Salaries.....	\$892,331	\$331,615	\$430,810	\$129,906	\$1,425,737	\$171,535	\$726,122	\$528,080
25 Supplies and materials.....	\$538,587	\$415,893	\$35,017	\$87,457	\$437,050	\$158,377	\$46,908	\$231,765
26 Fuel.....	\$425,687	\$266,030	\$18,557	\$123,100	\$301,120	\$129,993	\$62,252	\$88,875
27 Purchased electric energy.....	\$19,787	\$18,453	\$980	\$354	\$168	\$50	\$44	\$74
28 Contract work.....	\$1,271,050	\$799,137	\$17,299	\$454,614	\$667,592	\$140,799	\$87,883	\$638,910
29 Cost of buildings, machinery, and equipment erected or installed during year, total..	\$903,998	\$610,797	\$7,363	\$285,838	\$606,086	\$54,392	\$45,781	\$505,933
30 Buildings.....	\$86,379	\$51,486	\$477	\$34,414	\$37,400	\$18,979	\$8,680	\$9,761
31 Machinery and equipment, total.....	\$617,619	\$559,309	\$6,886	\$251,424	\$568,686	\$35,413	\$37,101	\$496,172
32 Purchased in new condition.....	\$766,727	\$510,664	\$5,522	\$250,540	\$468,677	\$20,686	\$12,249	\$435,740
33 Purchased in used condition.....	\$50,892	\$48,645	\$1,363	\$884	\$100,009	\$14,725	\$24,852	\$60,432
34 Cost of drilling and equipping wells completed in 1939.....	\$1,907,322	\$1,101,887	\$41,900	\$783,535	\$2,028,972	\$272,038	\$143,320	\$1,613,614
35 Footage of wells drilled and completed in 1939, total.....	1,010,239	728,170	26,485	255,584	878,600	99,612	66,700	712,088
36 Drilled on contract for reporting companies.....	822,773	620,088	9,233	194,472	451,717	71,304	59,680	320,753
37 Drilled by reporting companies for own account.....	188,466	108,102	17,252	61,112	426,883	28,508	7,040	391,335
38 Footage of wells drilled by reporting companies for other concerns.....	17,775	17,775	.....	.....	3,029	3,029	.....	.....
39 Number of man-hours worked by wage earners, total.....	2,591,095	1,584,155	254,234	772,706	2,887,730	1,226,925	412,290	1,248,515
40 Operating and maintaining wells.....	2,420,975	1,488,709	235,592	698,874	2,552,142	1,200,050	400,619	951,473
41 Drilling wells and rig building.....	150,976	72,082	16,562	62,352	323,634	19,742	6,850	297,042
42 Per foot drilled by reporting companies.....	0.74	0.57	0.98	1.02	0.75	0.83	0.97	0.76
43 Doing other work.....	19,144	5,384	2,080	11,680	11,854	7,133	4,821	.....
44 Average number of wage earners on active days, total.....	1,412	887	140	405	1,773	798	245	730
45 Full-time workers.....	1,137	684	121	332	1,259	518	180	563
46 Part-time workers.....	275	183	19	73	514	282	65	167
47 Operating and maintaining wells, total	1,280	798	125	357	1,526	751	232	543
48 Full-time workers.....	1,023	622	106	295	1,079	491	170	418
49 Part-time workers.....	257	176	19	62	447	260	62	125
50 Drilling wells and rig building, total	116	66	9	41	241	43	11	187
51 Full-time workers.....	102	60	9	33	175	22	8	145
52 Part-time workers.....	14	6	.....	8	66	21	3	42
53 Doing other work, total.....	16	3	6	7	6	4	2	.....
54 Full-time workers.....	12	2	6	4	5	3	2	.....
55 Part-time workers.....	4	1	.....	3	1	1	.....	.....
56 Average hourly earning of wage earners...	\$0.66	\$0.65	\$0.74	\$0.66	\$0.68	\$0.65	\$0.66	\$0.72
57 Horsepower rating of power equipment.....	32,627	26,970	2,354	3,303	60,383	33,297	21,123	5,964
58 Per wage earner.....	24.0	32.7	18.8	8.4	35.8	44.2	66.4	8.6
59 Electric energy consumed (thousands of kw.-hrs.), total.....	884	792	83	9	39	3	27	9
60 Purchased.....	808	718	63	9	4	1	1	2
Generated by reporting companies.....	76	76	.....	.....	35	2	26	7

See footnotes at end of table.

## CRUDE PETROLEUM AND NATURAL GAS

153

IN THE UNITED STATES, BY TYPE OF OPERATION AND BY STATE: 1939<sup>1</sup>—Continued  
operations only]

OKLAHOMA				PENNSYLVANIA				
Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	
1,086	859	189	83	726	443	84	235	1
50,384	29,965	19,142	1,277	65,484	35,307	14,386	15,791	2
48,314	29,965	18,349	.....	49,172	35,307	13,865	.....	3
2,070	.....	793	1,277	16,312	.....	521	15,791	4
153,144,020	84,376,163	68,756,027	11,830	14,059,608	10,868,161	3,174,963	16,484	5
294,124,042	129,796,808	117,481,569	46,845,667	91,761,598	3,699,429	2,685,257	85,376,912	6
214,974,122	75,770,834	93,445,136	45,758,352	82,613,788	499,429	1,515,941	80,598,398	7
79,149,920	54,026,172	24,086,433	1,087,315	9,147,830	3,200,000	1,169,316	4,778,514	8
703,783	160,353	18,284	525,126	121,509	110,454	535	10,520	9
\$164,702,209	\$89,308,283	\$73,473,511	\$1,920,415	\$45,092,696	\$22,480,717	\$6,706,719	\$15,905,280	10
\$158,528,359	\$87,467,928	\$71,048,506	\$11,925	\$28,782,426	\$22,329,603	\$6,418,863	\$33,960	11
\$5,176,414	\$1,321,146	\$1,964,737	\$1,890,531	\$16,220,461	\$99,236	\$281,482	\$15,833,742	12
\$21,027	\$6,934	\$649	\$13,444	\$5,077	\$4,613	\$18	\$446	13
\$33,524	\$13,860	\$19,652	\$12	\$468	\$468	.....	.....	14
\$942,885	\$498,415	\$439,967	\$4,503	\$84,284	\$46,797	\$6,356	\$31,111	15
22,749	12,701	9,710	338	8,485	4,052	1,649	2,784	16
16,126	9,180	6,724	222	6,308	3,059	1,271	1,978	17
5,903	2,943	2,672	88	1,386	411	334	641	18
720	578	114	28	791	582	44	165	19
137	86	39	12	250	158	22	70	20
\$66,126,746	\$34,829,403	\$30,548,486	\$748,857	\$19,274,487	\$9,596,276	\$3,807,889	\$5,870,322	21
\$22,132,570	\$11,571,903	\$10,337,998	\$222,669	\$8,066,838	\$3,740,091	\$1,871,412	\$2,455,135	22
\$16,068,651	\$8,122,333	\$7,794,240	\$150,278	\$3,545,342	\$1,133,381	\$1,096,328	\$1,315,633	23
\$11,125,207	\$6,513,432	\$4,520,078	\$89,697	\$1,983,372	\$1,364,693	\$275,272	\$343,407	24
\$2,436,215	\$1,011,391	\$1,408,953	\$15,871	\$1,628,454	\$754,735	\$412,186	\$461,533	25
\$1,080,798	\$753,030	\$327,726	\$42	\$190,740	\$184,502	\$4,676	\$1,562	26
\$13,287,105	\$6,857,314	\$6,159,491	\$270,300	\$3,859,941	\$2,418,874	\$148,015	\$1,293,052	27
\$11,398,546	\$5,900,982	\$5,126,294	\$371,270	\$2,805,487	\$1,925,042	\$263,303	\$617,142	28
\$758,198	\$219,873	\$536,539	\$1,088	\$116,204	\$88,604	\$3,898	\$23,702	29
\$10,642,548	\$5,682,409	\$4,588,755	\$370,184	\$2,689,283	\$1,836,436	\$259,405	\$593,440	30
\$7,561,495	\$2,785,007	\$3,637,996	\$158,492	\$2,570,748	\$1,755,861	\$251,139	\$568,748	31
\$3,080,853	\$1,917,402	\$951,759	\$211,692	\$118,537	\$80,577	\$8,266	\$29,694	32
\$22,565,518	\$12,943,018	\$9,180,769	\$441,731	\$5,719,696	\$3,219,250	\$313,302	\$2,187,144	33
4,266,169	2,511,146	1,624,622	130,401	3,041,987	1,931,376	150,249	960,362	34
2,488,876	1,489,318	927,041	72,517	2,392,697	1,655,600	77,000	660,297	35
1,777,293	1,021,828	697,581	57,864	849,090	275,776	73,249	300,065	36
28,122	28,122	.....	.....	9,920	9,920	.....	.....	37
28,194,518	15,270,929	12,599,273	324,316	11,566,600	5,567,065	2,505,971	3,493,544	38
26,151,691	14,275,787	11,615,085	280,839	10,840,688	5,331,340	2,484,480	3,044,888	39
1,663,223	921,775	681,187	60,263	561,540	205,474	36,650	319,416	40
0.92	0.88	0.98	1.04	0.85	0.72	0.50	1.06	41
379,604	73,369	303,021	3,214	164,372	30,271	4,661	129,240	42
16,823	9,772	6,772	279	6,525	3,185	1,288	2,052	43
13,281	7,005	6,100	156	5,059	2,431	1,157	1,471	44
3,562	2,787	672	123	1,466	754	131	561	45
14,983	8,628	6,143	192	5,937	2,955	1,256	1,726	46
11,885	6,215	5,575	95	4,636	2,259	1,134	1,243	47
3,078	2,413	588	97	1,301	696	122	463	48
1,614	1,077	461	76	451	191	26	234	49
1,202	760	382	60	343	160	18	165	50
412	317	79	16	108	31	8	69	51
246	67	168	11	137	39	6	92	52
174	30	143	1	80	12	5	63	53
72	37	25	10	57	27	1	29	54
\$0.78	\$0.78	\$0.82	\$0.69	\$0.70	\$0.67	\$0.75	\$0.70	55
650,988	409,156	238,726	3,086	170,871	114,204	25,067	31,600	56
40.4	44.6	35.5	13.9	27.1	37.3	19.7	16.0	57
138,843	102,114	36,726	3	17,256	13,704	3,466	84	58
118,911	89,498	29,412	1	12,932	12,627	257	48	59
19,932	12,616	7,314	2	4,324	1,077	3,211	36	60

TABLE 10.—PRINCIPAL STATISTICS FOR THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY

[For producing

ITEM	TEXAS			
	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only
1 Number of operating companies <sup>2</sup> .....	2,697	2,225	377	131
2 Number of wells producing December 31, 1939, total.....	89,568	56,974	30,496	2,098
3 Oil wells.....	36,721	56,974	29,747	.....
4 Gas wells.....	2,847	.....	749	2,098
5 Quantity of products:				
6 Crude petroleum (barrels).....	467,582,948	289,526,105	177,932,752	124,091
7 Natural gas (thousands of cu.ft.), total.....	1,183,831,454	305,537,993	335,697,354	542,596,107
8 Marketed.....	902,434,600	217,267,418	264,924,065	420,243,117
9 All other production.....	281,396,854	88,270,575	70,775,289	122,352,990
10 "Drip" gasoline (gallons).....	7,687,292	303,408	31,336	7,352,548
11 Value of products, total.....	\$492,198,843	\$297,948,534	\$180,896,225	\$13,354,084
12 Crude petroleum.....	\$467,469,601	\$291,789,714	\$175,573,351	\$126,636
13 Marketed natural gas.....	\$21,234,076	\$3,928,303	\$4,288,151	\$13,017,622
14 "Drip" gasoline.....	\$220,647	\$10,442	\$873	\$209,332
15 Other products.....	\$101,371	\$46,883	\$54,474	\$14
16 Amount received or due for services performed for others.....	\$3,173,148	\$2,193,192	\$979,376	\$580
17 Number of persons engaged, total.....	43,246	26,807	15,345	1,094
18 Wage earners (average for the year, including inactive periods).....	30,823	19,361	11,014	448
19 Salaried employees.....	10,573	5,776	4,210	587
20 Proprietors and firm members (not applicable to corporations).....	1,850	1,670	121	59
21 Performing manual labor.....	271	211	48	12
22 Principal expenses designated below, total.....	\$181,529,349	\$107,490,983	\$69,014,058	\$5,024,308
23 Wages.....	\$46,559,650	\$27,813,953	\$18,149,397	\$599,310
24 Salaries.....	\$28,737,967	\$16,159,357	\$11,414,692	\$1,153,918
25 Supplies and materials.....	\$25,787,339	\$15,766,719	\$9,439,079	\$581,541
26 Fuel.....	\$5,101,370	\$3,105,865	\$1,881,365	\$114,120
27 Purchased electric energy.....	\$1,754,473	\$1,068,470	\$681,988	\$4,015
28 Contract work.....	\$73,588,550	\$43,568,619	\$27,447,527	\$2,574,404
29 Cost of buildings, machinery, and equipment erected or installed during year, total.....	\$81,794,932	\$53,736,618	\$26,244,890	\$1,813,424
30 Buildings.....	\$3,042,474	\$1,633,739	\$1,396,374	\$12,361
31 Machinery and equipment, total.....	\$78,752,458	\$52,102,879	\$24,848,516	\$1,801,063
32 Purchased in new condition.....	\$74,775,775	\$49,448,992	\$23,542,133	\$1,784,650
33 Purchased in used condition.....	\$3,976,683	\$2,653,887	\$1,306,383	\$16,413
34 Cost of drilling and equipping wells completed in 1939.....	\$150,812,346	\$90,626,462	\$54,952,024	\$5,233,860
35 Footage of wells drilled and completed in 1939, total.....	31,070,949	19,773,788	10,506,378	790,787
36 Drilled on contract for reporting companies.....	17,854,855	10,859,213	6,446,760	548,882
37 Drilled by reporting companies for own account.....	13,216,094	8,914,573	4,059,616	241,905
38 Footage of wells drilled by reporting companies for other concerns.....	763,059	487,839	275,220	.....
39 Number of man-hours worked by wage earners, total.....	55,721,781	34,325,434	20,611,369	784,978
40 Operating and maintaining wells.....	42,964,188	26,651,585	15,737,690	574,913
41 Drilling wells and rig building.....	10,728,667	6,866,368	3,832,234	210,065
42 Per foot drilled by reporting companies.....	0.77	0.73	0.84	0.87
43 Doing other work.....	2,028,926	787,481	1,241,445	.....
44 Average number of wage earners on active days, total.....	32,674	20,911	11,224	539
45 Full-time workers.....	26,258	15,629	10,232	397
46 Part-time workers.....	6,416	5,282	992	142
47 Operating and maintaining wells, total.....	24,023	15,350	8,333	340
48 Full-time workers.....	19,189	11,328	7,630	231
49 Part-time workers.....	4,834	4,022	703	109
50 Drilling wells and rig building, total.....	7,420	5,044	2,177	199
51 Full-time workers.....	5,998	3,931	1,901	168
52 Part-time workers.....	1,422	1,113	276	33
53 Doing other work, total.....	1,231	517	714	.....
54 Full-time workers.....	1,071	370	701	.....
55 Part-time workers.....	160	147	13	.....
56 Average hourly earning of wage earners.....	\$0.84	\$0.81	\$0.88	\$0.76
57 Horsepower rating of power equipment.....	862,583	552,329	296,456	13,798
58 Per wage earner.....	28.0	28.5	26.9	30.8
59 Electric energy consumed (thousands of kw.-hrs. total.....	168,558	98,429	69,269	860
60 Purchased.....	156,654	91,651	64,290	813
Generated by reporting companies.....	11,904	6,878	4,979	47

<sup>1</sup>For definition of the industry see table 7, footnote 1; for explanations of terms used see appropriate footnotes to tables 3 and 7.<sup>2</sup>Companies with operations in more than 1 State or more than 1 type of operation are counted only once in the totals. Of the total number, 339 companies had oil- and gas-producing operations in 2 of the designated States; 35, in 3 of the States; 29, in 4 of the States; 12, in 5 of the States; 7, in 6 of the States; 4, in 7 of the States; 4, in 8 of the States; 2, in 9 of the States; 1, in 10 of the States; 1, in 11 of the States; 1, in 12 of the States; and 1, in 13 of the States.<sup>3</sup>South Dakota, 1 company; Utah, 2; and Washington, 1.

## CRUDE PETROLEUM AND NATURAL GAS

155

IN THE UNITED STATES, BY TYPE OF OPERATION AND BY STATE: 1939<sup>1</sup>—Continued  
operations only]

WEST VIRGINIA				WYOMING				
Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	Total	Oil-well operations only	Oil- and gas-well operations	Gas-well operations only	
419	109	98	263	68	45	15	9	1
26,137	10,926	3,580	11,651	2,873	1,578	1,013	82	2
14,017	10,926	3,091	11,651	2,562	1,578	984	82	3
12,120	.....	469	.....	111	.....	29	.....	4
3,251,055	2,374,574	855,914	20,587	22,269,068	11,117,745	11,151,323	.....	5
154,989,980	10,898,700	9,217,986	134,875,294	40,246,194	11,952,140	14,171,889	14,121,185	6
136,782,359	4,834,888	6,852,042	125,295,331	38,148,585	11,064,435	13,037,612	14,024,338	7
18,207,601	6,281,714	2,365,924	9,579,963	2,098,809	887,705	1,134,257	96,847	8
11,942,010	583,387	.....	11,358,623	23,288	8,899	.....	14,369	9
\$23,020,022	\$4,630,199	\$2,395,555	\$15,994,268	\$20,875,984	\$9,283,396	\$10,945,420	\$667,168	10
\$5,431,605	\$3,995,542	\$1,408,711	\$29,352	\$19,678,078	\$9,089,854	\$10,808,124	.....	11
\$17,199,268	\$810,701	\$985,918	\$15,802,649	\$1,150,839	\$153,983	\$330,707	\$668,169	12
\$339,121	\$20,016	.....	\$319,105	\$1,205	\$611	.....	\$594	13
\$53	\$13	\$20	.....	\$15,120	\$5,578	\$7,448	\$94	14
\$49,995	\$3,927	\$2,908	\$43,162	\$34,742	\$33,290	\$1,141	\$311	15
6,418	2,005	795	3,618	1,388	779	521	88	16
5,290	1,893	641	2,958	1,039	577	405	57	17
708	212	62	432	538	196	114	29	18
422	100	92	230	9	7	2	.....	19
104	19	28	57	1	.....	1	.....	20
\$10,650,407	\$3,254,804	\$1,176,473	\$6,219,330	\$6,189,557	\$2,720,023	\$3,183,730	\$285,804	21
\$6,045,163	\$2,142,930	\$610,466	\$5,291,747	\$1,763,862	\$987,439	\$394,191	\$82,232	22
\$1,356,057	\$468,476	\$151,657	\$745,924	\$694,364	\$323,737	\$300,133	\$70,494	23
\$862,086	\$271,452	\$145,354	\$445,280	\$449,596	\$288,739	\$152,288	\$8,599	24
\$397,961	\$117,141	\$123,902	\$158,918	\$143,128	\$107,395	\$32,388	\$3,345	25
\$13,076	\$11,756	\$195	\$1,125	\$138,432	\$125,133	\$13,299	.....	26
\$1,976,064	\$252,849	\$144,879	\$1,578,338	\$3,000,175	\$887,580	\$1,991,461	\$121,134	27
\$1,891,635	\$269,809	\$113,708	\$1,508,318	\$1,261,268	\$481,683	\$714,492	\$65,091	28
\$66,921	\$11,505	\$8,920	\$48,498	\$57,991	\$22,747	\$35,244	.....	29
\$1,824,714	\$258,104	\$104,788	\$1,461,822	\$1,203,275	\$458,936	\$679,248	\$65,091	30
\$1,695,020	\$208,585	\$81,429	\$1,405,008	\$1,119,337	\$389,790	\$664,817	\$64,730	31
\$129,694	\$49,619	\$25,359	\$58,816	\$83,938	\$69,146	\$14,431	\$31	32
\$3,980,847	\$217,615	\$331,229	\$5,432,103	\$4,643,556	\$1,450,738	\$3,003,581	\$189,237	33
1,138,428	88,671	130,479	919,278	371,539	128,498	227,341	15,500	34
731,125	56,056	66,166	608,903	308,883	76,539	218,844	15,500	35
407,303	32,615	64,313	310,375	82,458	51,959	10,497	.....	36
752	752	.....	.....	.....	.....	.....	.....	37
9,025,879	3,195,094	1,033,805	4,796,780	2,075,248	1,098,124	871,719	107,405	38
8,568,908	3,133,155	948,410	4,487,341	1,944,948	978,254	859,289	107,405	39
412,204	50,329	76,767	285,108	114,870	102,240	12,430	.....	40
1.01	1.51	1.19	0.92	1.84	1.87	1.18	.....	41
44,569	11,610	8,628	24,331	15,630	15,630	.....	.....	42
5,430	1,734	661	3,035	1,103	627	419	57	43
3,841	1,517	457	1,867	1,021	573	403	45	44
1,589	217	204	1,168	82	54	16	12	45
4,989	1,671	587	2,711	1,000	530	413	57	46
3,553	1,473	397	1,683	932	489	398	45	47
1,418	198	190	1,028	88	41	15	12	48
400	53	67	280	95	89	6	.....	49
254	42	57	155	82	77	5	.....	50
146	11	10	125	13	12	1	.....	51
61	10	7	44	8	8	.....	.....	52
34	2	3	29	7	7	.....	.....	53
27	8	4	15	1	1	.....	.....	54
\$0.67	\$0.67	\$0.59	\$0.69	\$0.85	\$0.90	\$0.80	\$0.77	55
101,133	56,497	28,821	15,815	26,241	19,758	5,861	624	56
19.1	33.4	45.0	5.4	25.3	34.2	14.5	10.9	57
823	575	50	198	11,842	11,321	521	.....	58
618	575	4	39	11,505	11,015	490	.....	59
205	.....	46	159	337	308	31	.....	60

<sup>1</sup>includes statistics for central-office employees distributed as follows: Oil-well operations only, 18 salaried employees paid \$25,816 at central offices in Florida, Iowa, Maryland, Minnesota, New Jersey, and Rhode Island; oil- and gas-well operations, 2 salaried employees paid \$3,140 at central offices in Maryland; and gas-well operations only, 10 salaried employees paid \$15,594 at central offices in Minnesota, Nebraska, and Oregon.

<sup>2</sup>The reported man-hours were for drilling a well which was not completed at the end of 1939.



TABLE 11.—QUANTITY AND VALUE OF PRODUCTS OF THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY KIND OF PRODUCT AND BY STATE: 1939<sup>1</sup>

ITEM	United States	Arkansas	California	Colorado	Illinois	Indiana
Value of all products.....	\$1,375,953,578	\$17,020,274	\$250,424,351	\$1,391,229	\$98,618,028	\$1,694,195
Crude petroleum:						
Barrels.....	1,228,133,816	20,914,947	223,904,320	1,375,609	93,593,753	1,644,555
Value at wells.....	\$1,251,904,665	\$16,451,592	\$229,962,935	\$1,301,043	\$95,972,110	\$1,568,580
Average value per barrel.....	\$1.02	\$0.79	\$1.03	\$0.95	\$1.03	\$0.95
Natural gas:						
Thousands of cubic feet, total.....	2,929,184,828	19,464,269	393,819,510	2,613,120	8,980,061	1,331,399
Marketed:						
Thousands of cubic feet.....	2,287,413,258	11,323,305	278,332,737	2,221,564	2,800,376	704,591
Value at wells.....	\$115,549,665	\$547,558	\$18,850,430	\$88,657	\$83,969	\$114,963
Average value per M cubic feet (cents).....	5.0	4.8	6.8	4.0	3.0	18.3
All other production.....	641,771,572	8,140,964	117,486,773	391,556	6,179,685	626,808
Casinghead gas: <sup>2</sup>						
Thousands of cubic feet, total.....	1,504,626,430	15,161,049	367,753,378	367,226	7,927,585	430,457
Marketed:						
Thousands of cubic feet.....	1,050,015,973	7,121,875	252,367,338	141,164	2,178,510	23,440
Value at wells.....	\$35,655,710	\$151,893	\$16,958,842	\$5,315	\$40,224	\$2,415
Average value per M cubic feet (cents).....	3.4	2.1	6.7	3.8	1.8	10.3
All other production.....	454,610,457	8,039,174	115,386,040	226,062	5,751,075	407,017
"Dry" gas: <sup>3</sup>						
Thousands of cubic feet, total.....	1,424,558,398	4,503,240	26,066,132	2,245,894	1,052,476	900,942
Marketed:						
Thousands of cubic feet.....	1,237,397,283	4,201,430	23,965,399	2,080,400	623,886	681,151
Value at wells.....	\$79,693,955	\$395,685	\$1,893,588	\$83,342	\$43,745	\$112,548
Average value per M cubic feet (cents).....	6.4	9.4	7.9	4.0	7.0	18.5
All other production.....	187,161,115	101,610	2,100,733	165,494	428,610	219,791
"Drip" gasoline:						
Gallons.....	36,088,703	5,580	8,507,369	72,801	27,717	380
Value at wells.....	\$1,179,545	\$290	\$389,298	\$1,529	\$2,221	\$22
Average value per gallon (cents).....	3.3	5.2	4.6	2.1	8.0	5.8
Value of steam sold.....	\$172,923	\$7,330	\$719		\$9,860	\$1,382
Value of water sold.....	\$51,777					
Electric energy generated and sold:						
Kilowatt-hours (thousands).....	394		12		1	
Value.....	\$11,606		\$370		\$12	
Value of other and unspecified products.....	\$15,044		\$8,165			
Amounts received or due for services performed for others <sup>4</sup> .....	\$7,288,351	\$13,504	\$1,212,414		\$549,856	\$9,248

  

ITEM	Kansas	Kentucky	Louisiana	Michigan	Mississippi	Missouri
Value of all products.....	\$63,018,725	\$9,388,020	\$106,663,668	\$22,383,523	\$712,093	\$58,858
Crude petroleum:						
Barrels.....	57,324,967	4,206,549	92,056,755	23,282,258	101,977	26,409
Value at wells.....	\$59,233,399	\$4,356,630	\$95,470,346	\$20,808,947	\$91,943	\$21,103
Average value per barrel.....	\$1.03	\$1.04	\$1.04	\$0.89	\$0.90	\$0.80
Natural gas:						
Thousands of cubic feet, total.....	83,960,332	40,627,597	378,366,004	12,712,290	14,422,270	397,780
Marketed:						
Thousands of cubic feet.....	78,080,184	35,123,351	305,210,547	9,316,445	14,376,583	336,180
Value at wells.....	\$3,443,591	\$4,968,629	\$10,662,582	\$1,208,957	\$620,150	\$36,102
Average value per M cubic feet (cents).....	4.4	14.1	3.5	13.0	4.3	10.7
All other production.....	5,880,148	5,504,246	73,155,457	3,395,845	45,687	61,600
Casinghead gas: <sup>2</sup>						
Thousands of cubic feet, total.....	25,800,196	4,258,580	163,472,554	5,006,896	5,449	2,200
Marketed:						
Thousands of cubic feet.....	21,459,121	3,659,308	104,261,624	1,642,851		600
Value at wells.....	\$438,144	\$430,988	\$2,350,570	\$111,229		\$48
Average value per M cubic feet (cents).....	2.0	11.8	2.3	6.8		8.0
All other production.....	4,341,075	599,272	59,210,730	3,364,045	5,449	1,600
"Dry" gas: <sup>3</sup>						
Thousands of cubic feet, total.....	58,160,136	36,369,017	214,893,450	7,705,394	14,416,821	395,580
Marketed:						
Thousands of cubic feet.....	56,821,063	31,484,043	200,948,723	7,673,594	14,376,583	335,580
Value at wells.....	\$3,005,447	\$4,535,641	\$8,312,012	\$1,097,728	\$620,150	\$36,054
Average value per M cubic feet (cents).....	5.3	14.4	4.1	14.3	4.3	10.7
All other production.....	1,539,073	4,904,974	13,944,727	31,800	40,238	60,000
"Drip" gasoline:						
Gallons.....	1,895,449	84,000	4,141,621			
Value at wells.....	\$49,394	\$4,200	\$128,382			
Average value per gallon (cents).....	2.6	5.0	3.1			
Value of steam sold.....	\$6,445		\$23,534	\$233		
Value of water sold.....	\$2,517		\$2,248			
Electric energy generated and sold:						
Kilowatt-hours (thousands).....	3		11	4		
Value.....	\$32		\$688	\$150		
Value of other and unspecified products.....	\$384	\$4,611				
Amounts received or due for services performed for others <sup>4</sup> .....	\$282,963	\$55,950	\$375,908	\$365,236		\$1,653

<sup>1</sup> For definition of the industry see table 7, footnote 1.<sup>2</sup> Gas from wells that produced both oil and gas.<sup>3</sup> Gas from wells that produced no oil.<sup>4</sup> For detailed statistics on major types of work performed and amount received or due for each type, see table 12.

TABLE 11.—QUANTITY AND VALUE OF PRODUCTS OF THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY KIND OF PRODUCT AND BY STATE: 1939<sup>1</sup>—Continued

ITEM	Montana	New Mexico	New York	Ohio	Oklahoma	Pennsylvania
Value of all products.....	\$6,838,878	\$32,070,595	\$12,083,589	\$9,421,588	\$164,702,209	\$45,092,696
Crude petroleum:						
Barrels.....	5,843,735	37,575,278	3,898,376	2,030,418	153,144,020	14,059,608
Value at wells.....	\$5,679,091	\$30,584,706	\$8,018,025	\$2,470,818	\$158,528,359	\$28,782,426
Average value per barrel.....	\$0.97	\$0.81	\$2.06	\$1.22	\$1.04	\$2.05
Natural gas:						
Thousands of cubic feet, total.....	26,685,888	105,862,803	31,328,337	37,751,944	294,124,042	91,761,598
Marketed:						
Thousands of cubic feet.....	24,321,831	83,355,842	29,119,526	34,000,173	214,974,122	82,613,768
Value at wells.....	\$1,130,840	\$1,434,445	\$4,040,466	\$6,925,210	\$5,176,414	\$16,220,461
Average value per M cubic feet (cents).....	4.6	1.7	13.9	20.4	2.4	19.6
All other production.....	2,364,057	22,506,761	2,208,811	3,751,771	79,149,920	9,147,830
Casinghead gas: <sup>2</sup>						
Thousands of cubic feet, total.....	3,174,875	78,520,293	2,804,159	2,970,333	224,413,421	14,761,134
Marketed:						
Thousands of cubic feet.....	1,581,679	57,304,049	1,546,015	2,009,055	149,071,212	10,376,487
Value at wells.....	\$87,662	\$388,898	\$195,348	\$332,471	\$2,483,526	\$2,518,194
Average value per M cubic feet (cents).....	5.5	0.7	12.6	16.5	1.7	24.3
All other production.....	1,593,196	21,216,244	1,258,144	961,278	75,342,209	4,384,647
"Dry" gas: <sup>3</sup>						
Thousands of cubic feet, total.....	23,511,013	27,342,310	28,524,178	34,781,611	69,710,621	77,000,464
Marketed:						
Thousands of cubic feet.....	22,740,152	26,051,793	27,573,511	31,991,118	65,902,910	72,237,281
Value at wells.....	\$1,043,178	\$1,045,547	\$3,845,118	\$6,592,739	\$2,692,888	\$13,702,267
Average value per M cubic feet (cents).....	4.6	4.0	13.9	20.6	4.1	19.0
All other production.....	770,861	1,290,517	950,667	2,790,493	3,807,711	4,763,183
"Drip" gasoline:						
Gallons.....	.....	64,149	.....	75	703,763	121,509
Value at wells.....	.....	\$362	.....	\$5	\$21,027	\$5,077
Average value per gallon (cents).....	.....	0.6	.....	6.7	3.0	4.2
Value of steam sold.....	\$784	\$2,597	.....	\$170	\$27,863	\$18
Value of water sold.....	.....	\$29,993	\$153	.....	\$3,499	\$450
Electric energy generated and sold:						
Kilowatt-hours (thousands).....	5	.....	.....	.....	71	.....
Value.....	\$437	.....	.....	.....	\$2,142	.....
Value of other and unspecified products.....	.....	.....	.....	.....	.....	.....
Amounts received or due for services performed for others <sup>4</sup> .....	\$27,526	\$38,492	\$24,945	\$25,385	\$942,865	\$84,264

  

ITEM	Tennessee	Texas	West Virginia	Wyoming	South Dakota, Utah, and Washington
Value of all products.....	\$44,878	\$492,198,843	\$23,020,022	\$20,875,984	\$231,530
Crude petroleum:					
Barrels.....	43,862	487,582,948	3,251,055	22,269,088	1,349
Value at wells.....	\$43,979	\$487,489,601	\$5,431,605	\$19,678,078	\$1,349
Average value per barrel.....	\$1.00	\$1.00	\$1.67	\$0.88	\$1.00
Natural gas:					
Thousands of cubic feet, total.....	32,456	1,183,831,454	154,989,980	40,245,194	5,876,700
Marketed:					
Thousands of cubic feet.....	8,281	902,434,600	136,782,359	38,146,385	5,830,508
Value at wells.....	\$682	\$21,234,078	\$17,199,268	\$1,150,839	\$213,396
Average value per M cubic feet (cents).....	8.0	2.4	12.6	3.0	3.7
All other production.....	24,175	281,398,854	18,207,601	2,098,809	46,194
Casinghead gas: <sup>2</sup>					
Thousands of cubic feet, total.....	13,625	545,018,583	20,987,693	21,776,784	.....
Marketed:					
Thousands of cubic feet.....	1,000	402,095,093	13,292,505	19,884,847	.....
Value at wells.....	\$80	\$6,657,020	\$1,978,473	\$326,370	.....
Average value per M cubic feet (cents).....	8.0	1.7	14.9	1.6	.....
All other production.....	12,625	142,923,470	7,695,188	1,891,917	.....
"Dry" gas: <sup>3</sup>					
Thousands of cubic feet, total.....	18,831	638,812,891	134,002,267	18,466,430	5,876,700
Marketed:					
Thousands of cubic feet.....	7,281	500,339,507	123,489,854	18,261,538	5,830,508
Value at wells.....	\$582	\$14,377,056	\$15,220,795	\$824,469	\$213,396
Average value per M cubic feet (cents).....	8.0	2.9	12.3	4.5	3.7
All other production.....	11,550	138,473,384	10,512,413	206,892	46,194
"Drip" gasoline:					
Gallons.....	.....	7,687,292	11,942,010	23,268	789,740
Value at wells.....	.....	\$220,847	\$339,121	\$1,205	\$18,785
Average value per gallon (cents).....	.....	2.9	2.8	5.2	2.1
Value of steam sold.....	.....	\$82,792	\$25	\$9,151	.....
Value of water sold.....	.....	\$12,623	.....	\$94	.....
Electric energy generated and sold:					
Kilowatt-hours (thousands).....	.....	132	.....	155	.....
Value.....	.....	\$3,800	.....	\$3,675	.....
Value of other and unspecified products.....	.....	\$1,656	\$8	.....	.....
Amounts received or due for services performed for others <sup>4</sup> .....	\$237	\$3,173,148	\$49,995	\$34,742	.....

<sup>1</sup>For definition of the industry see table 7, footnote 1.<sup>2</sup>Gas from wells that produced both oil and gas.<sup>3</sup>Gas from wells that produced no oil.<sup>4</sup>For detailed statistics on major types of work performed and amount received or due for each type, see table 12.

## MINERAL INDUSTRIES

TABLE 12.—AMOUNTS RECEIVED OR DUE FOR OIL- AND GAS-FIELD SERVICES PERFORMED ON CONTRACT BY CONCERNS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY MAJOR TYPE OF WORK AND BY STATE: 1939<sup>1</sup>

STATE	Total	Exploration and well-surveying work	Hauling oil- and gas-field supplies and equipment	Excavating slush pits and cellars, grading, and building foundations at well locations	Drilling oil, gas, and dry wells <sup>2</sup>	Running, cutting, and pulling casing, tubes, and rods	Cementing wells	Cleaning out, balling, and swabbing wells	Drilling water wells	Installing production equipment (such as wellhead fittings, pumps, and engines)	Operating wells	Oil- and gas-field machine-shop and repair work	General well servicing
Number of concerns..	<sup>3</sup> 711	3	36	1	107	37	1	30	3	2	414	7	165
Amounts received or due for services performed, total..	\$7,288,351	\$16,072	\$188,857	\$16,119	\$3,245,923	\$305,582	\$14,958	\$62,040	\$8,399	\$10,075	\$2,450,655	\$37,961	\$911,710
Arkansas.....	\$13,504	.....	.....	.....	.....	\$259	.....	.....	.....	.....	\$4,354	.....	\$8,891
California.....	\$1,212,414	\$3,097	\$488	.....	\$143,138	.....	.....	\$3,890	.....	\$8,993	\$937,769	\$520	\$114,519
Illinois.....	\$549,856	\$4,000	\$1,159	.....	\$427,467	\$496	.....	.....	.....	.....	\$72,758	.....	\$43,976
Indiana.....	\$9,248	.....	.....	.....	\$8,226	.....	.....	\$650	.....	.....	\$372	.....	.....
Kansas.....	\$282,963	.....	\$28,008	.....	\$131,782	\$3,933	.....	\$4,303	\$946	.....	\$80,556	.....	\$33,435
Kentucky.....	\$55,950	.....	\$998	.....	\$50,850	.....	.....	.....	.....	.....	\$2,952	.....	\$1,150
Louisiana.....	\$375,908	.....	\$300	.....	\$14,813	\$256,566	.....	\$315	.....	\$1,082	\$45,392	.....	\$57,440
Michigan.....	\$365,236	.....	\$13,229	.....	\$272,427	\$4,489	.....	.....	.....	.....	\$29,471	.....	\$45,620
Missouri.....	\$1,653	.....	.....	.....	\$1,653	.....	.....	.....	.....	.....	.....	.....	.....
Montana.....	\$27,526	.....	\$924	.....	\$3,060	\$902	.....	.....	.....	.....	\$13,244	.....	\$9,396
New Mexico.....	\$38,492	.....	\$567	.....	\$22,531	.....	.....	.....	\$96	.....	.....	.....	\$6,802
New York.....	\$24,945	.....	\$1,028	.....	\$15,965	.....	.....	\$847	.....	.....	\$1,863	.....	\$5,202
Ohio.....	\$25,365	.....	.....	.....	\$4,765	\$4,720	.....	.....	.....	.....	\$2,819	.....	\$13,581
Oklahoma.....	\$942,865	.....	\$16,340	.....	\$80,235	\$4,379	.....	\$11,635	\$7,282	.....	\$635,063	\$15,691	\$192,282
Pennsylvania.....	\$84,264	\$8,975	.....	.....	\$12,611	\$130	.....	\$2,114	.....	.....	\$32,766	.....	\$27,468
Tennessee.....	\$237	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$23	.....	\$214
Texas.....	\$3,173,148	.....	\$125,756	\$16,119	\$2,073,660	\$29,188	.....	\$36,288	\$75	.....	\$542,731	\$21,515	\$325,836
West Virginia.....	\$60	.....	.....	.....	\$2,520	\$540	\$14,958	.....	.....	.....	\$26,263	\$213	\$5,441
Wyoming.....	\$34,742	.....	.....	.....	.....	.....	.....	.....	.....	.....	\$14,243	\$22	\$20,477

<sup>1</sup> For definition of the industry see table 7, footnote 1. Statistics include only amounts received by concerns that operated or drilled wells for their own account and from which complete separate reports covering contract work were not obtained. Statistics for all other concerns that performed oil- and gas-field contract work are shown only in tables 22 through 50.

<sup>2</sup> Detailed statistics for the number, footage, and costs of drilling and equipping wells on contract by concerns covered in this table are shown separately in tables 2 and 13.

<sup>3</sup> Of this number, 65 concerns reported amounts received for 2 of the designated types of work; 2, for 3 types of work; 4, for 4 types of work; and 1, for 5 types of work.

TABLE 13.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS DRILLED ON CONTRACT FOR OTHERS BY CONCERNS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Illinois	Indiana	Kansas	Kentucky	Louisiana	Michigan
Number of wells drilled, total.....	407	3	56	6	23	12	3	72
Oil wells.....	320	3	48	.....	17	5	2	51
Gas wells.....	14	.....	.....	3	1	.....	.....	1
Dry holes.....	73	.....	8	3	5	7	1	20
Footage drilled, total.....	1,185,714	22,937	129,143	5,342	47,478	16,500	7,648	126,184
Oil wells.....	948,318	22,937	112,414	.....	33,297	6,600	3,648	89,685
Gas wells.....	20,800	.....	.....	2,429	300	.....	.....	994
Dry holes.....	216,596	.....	16,729	2,913	13,881	9,900	4,000	35,305
Average footage drilled per well, all wells...	2,913	7,646	2,306	890	2,064	1,375	2,549	1,753
Oil wells.....	2,957	7,646	2,342	.....	1,959	1,320	1,824	1,782
Gas wells.....	1,450	.....	.....	810	300	.....	.....	994
Dry holes.....	3,001	.....	2,091	971	2,776	1,414	4,000	1,765
Cost borne by contracting concerns in drilling and equipping wells on contract, total <sup>2</sup> .....	\$2,408,727	\$112,498	\$256,182	\$5,266	\$96,771	\$33,496	\$11,684	\$251,007
Oil wells.....	\$1,855,289	\$112,498	\$209,677	.....	\$61,160	\$10,726	\$5,504	\$185,046
Gas wells.....	\$52,852	.....	.....	\$2,250	\$294	.....	.....	\$3,522
Dry holes.....	\$500,586	.....	\$46,505	\$3,016	\$35,317	\$22,770	\$6,180	\$62,439
Cost of drilling, total <sup>3</sup> .....	\$2,292,573	\$112,498	\$256,182	\$5,266	\$96,771	\$33,282	\$11,684	\$201,085
Per foot.....	\$1.93	\$4.90	\$1.98	\$0.99	\$2.04	\$2.02	\$1.53	\$1.59
Oil wells.....	\$1,773,236	\$112,498	\$209,677	.....	\$61,160	\$10,512	\$5,504	\$145,819
Per foot.....	\$1.87	\$4.90	\$1.87	.....	\$1.84	\$1.59	\$1.51	\$1.82
Gas wells.....	\$41,130	.....	.....	\$2,250	\$294	.....	.....	\$2,455
Per foot.....	\$2.03	.....	.....	\$0.93	\$0.98	.....	.....	\$2.47
Dry holes.....	\$478,007	.....	\$46,505	\$3,016	\$35,317	\$22,770	\$6,180	\$53,011
Per foot.....	\$2.18	.....	\$2.78	\$1.04	\$2.54	\$2.30	\$1.54	\$1.50
Cost of equipping wells, total <sup>4</sup> .....	\$116,354	.....	.....	.....	.....	\$214	.....	\$49,922
Oil wells.....	\$82,053	.....	.....	.....	.....	\$214	.....	\$39,427
Gas wells.....	\$11,722	.....	.....	.....	.....	.....	.....	\$1,067
Dry holes.....	\$22,579	.....	.....	.....	.....	.....	.....	\$9,428
Casing, total.....	\$76,250	.....	.....	.....	.....	\$125	.....	\$27,830
Oil wells.....	\$44,787	.....	.....	.....	.....	\$125	.....	\$17,864
Gas wells.....	\$8,884	.....	.....	.....	.....	.....	.....	\$738
Dry holes.....	\$22,579	.....	.....	.....	.....	.....	.....	\$9,428
Equipping for flowing and pumping, total <sup>5</sup> .....	\$39,804	.....	.....	.....	.....	\$89	.....	\$22,092
Oil wells.....	\$36,966	.....	.....	.....	.....	\$89	.....	\$21,763
Gas wells.....	\$2,838	.....	.....	.....	.....	.....	.....	\$328
Production derrick <sup>6</sup> .....	\$300	.....	.....	.....	.....	.....	.....	.....

See footnotes at end of table.

TABLE 13.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS DRILLED ON CONTRACT FOR OTHERS BY CONCERNS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>—Continued

ITEM	Missouri	Montana	New Mexico	New York	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia
Number of wells drilled, total.....	5	1	2	11	3	11	9	189	1
Oil wells.....	.....	1	.....	11	2	7	8	164	1
Gas wells.....	3	.....	2	.....	1	1	1	1	.....
Dry holes.....	2	.....	.....	.....	.....	3	.....	24	.....
Footage drilled, total.....	2,460	1,600	3,765	17,775	3,029	28,122	9,920	783,059	752
Oil wells.....	.....	1,600	.....	17,775	1,846	16,419	6,750	632,395	752
Gas wells.....	1,905	.....	3,765	.....	1,183	2,894	3,179	3,660	.....
Dry holes.....	555	.....	.....	.....	.....	8,809	.....	127,004	.....
Average footage drilled per well, all wells...	492	1,600	1,882	1,616	1,010	2,557	1,102	4,037	752
Oil wells.....	.....	1,600	.....	1,616	923	2,546	844	3,856	752
Gas wells.....	635	.....	1,882	.....	1,183	2,894	3,170	3,660	.....
Dry holes.....	278	.....	.....	.....	.....	2,836	.....	5,292	.....
Cost borne by contracting concerns in drilling and equipping wells on contract, total <sup>2</sup> .....	\$1,653	\$2,000	\$22,531	\$12,272	\$4,072	\$56,609	\$9,281	\$1,532,342	\$1,063
Oil wells.....	.....	\$2,000	.....	\$12,272	\$1,520	\$34,964	\$4,875	\$1,213,984	\$1,063
Gas wells.....	\$1,411	.....	\$22,531	.....	\$2,552	\$6,404	\$4,406	\$9,482	.....
Dry holes.....	\$242	.....	.....	.....	.....	\$15,241	.....	\$308,876	.....
Cost of drilling, total <sup>3</sup> .....	\$1,169	\$2,000	\$18,673	\$12,272	\$2,453	\$56,609	\$9,281	\$1,472,085	\$1,063
Per foot.....	\$0.48	\$1.25	\$4.96	\$0.69	\$0.81	\$2.01	\$0.94	\$1.93	\$1.41
Oil wells.....	.....	\$2,000	.....	\$12,272	\$1,500	\$34,964	\$4,875	\$1,171,592	\$1,063
Per foot.....	.....	\$1.25	.....	\$0.69	\$0.81	\$2.13	\$0.72	\$1.85	\$1.41
Gas wells.....	\$927	.....	\$18,673	.....	\$953	\$6,404	\$4,406	\$4,768	.....
Per foot.....	\$0.49	.....	\$4.96	.....	\$0.81	\$2.21	\$1.39	\$1.30	.....
Dry holes.....	\$242	.....	.....	.....	.....	\$15,241	.....	\$295,725	.....
Per foot.....	\$0.44	.....	.....	.....	.....	\$1.73	.....	\$2.33	.....
Cost of equipping wells, total <sup>4</sup> .....	\$484	.....	\$3,858	.....	\$1,619	.....	.....	\$60,257	.....
Oil wells.....	.....	.....	.....	.....	\$20	.....	.....	\$42,392	.....
Gas wells.....	\$484	.....	\$3,858	.....	\$1,599	.....	.....	\$4,714	.....
Dry holes.....	.....	.....	.....	.....	.....	.....	.....	\$13,151	.....
Casing, total.....	.....	.....	\$3,287	.....	\$1,224	.....	.....	\$43,784	.....
Oil wells.....	.....	.....	.....	.....	\$15	.....	.....	\$26,983	.....
Gas wells.....	.....	.....	\$3,287	.....	\$1,209	.....	.....	\$3,650	.....
Dry holes.....	.....	.....	.....	.....	.....	.....	.....	\$13,151	.....
Equipping for flowing and pumping, total <sup>5</sup> .....	\$484	.....	\$571	.....	\$395	.....	.....	\$16,173	.....
Oil wells.....	.....	.....	.....	.....	\$5	.....	.....	\$15,109	.....
Gas wells.....	\$484	.....	\$571	.....	\$390	.....	.....	\$1,064	.....
Production derrick <sup>6</sup> .....	.....	.....	.....	.....	.....	.....	.....	\$300	.....

<sup>1</sup>For definition of the industry see table 7, footnote 1; for explanation of concerns covered see table 12, footnote 1. Statistics represent oil wells, gas wells, and dry holes drilled and completed in 1939 including those completed in 1939 although begun in 1938. Concerns were not requested to report statistics on the number of wells, footage drilled, or drilling costs of oil, gas, or dry wells that were only "spudded in," drilled deeper, or in process of drilling at the end of 1939, or for water-intake wells (for water flooding to increase oil production or for water disposal), or gas- or air-intake wells (for repressuring), or water-supply wells unless drilled and chargeable to oil- or gas-well drilling operations (in which case the cost of such water wells was to be included in the cost of drilling the oil or gas wells but the number and footage of the water wells were not called for). However, 2 water-flooding wells, 1 in New York and 1 in Pennsylvania, were reported; the total footage of these wells was 2,781 and the total cost of drilling them, \$2,411. Statistics for these water-flooding wells are not included in the figures presented in this table.

<sup>2</sup>Contractors were requested to exclude costs borne directly by concerns for whom wells were drilled and not covered by the amounts received by the contractor for work performed. Profits or losses cannot be calculated by subtracting the costs borne by contractors in drilling and equipping wells from amounts received or due for work performed. These costs do not include certain other important items such as taxes, interest, and insurance; on the other hand, the amounts received include some receipts for contract services other than drilling and equipping the wells completed.

<sup>3</sup>See table 2, footnote 6.

<sup>4</sup>See table 2, footnote 7.

<sup>5</sup>See table 2, footnote 8.

<sup>6</sup>See table 2, footnote 9. Figure represents cost of production derrick for 1 oil well.

## MINERAL INDUSTRIES

TABLE 14.—NUMBER OF WAGE EARNERS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY TYPE OF OPERATION, BY STATE, AND BY MONTH: 1939<sup>1</sup>

[For producing operations only]

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.....	105,186	103,731	103,080	104,000	104,166	106,056	106,065	107,259	106,587	104,896	105,447	106,083	104,605
TYPE OF OPERATION													
Oil-well operations only.....	61,076	59,803	59,728	60,397	60,634	61,924	61,878	62,492	62,034	60,727	60,981	61,276	61,042
Oil- and gas-well operations.....	36,214	36,525	36,077	36,273	35,826	36,422	36,432	36,848	36,556	35,825	36,052	36,061	35,674
Gas-well operations only.....	7,876	7,403	7,275	7,330	7,706	7,710	7,775	7,919	7,997	8,344	8,414	8,746	7,889
STATE													
Arkansas.....	1,722	1,766	1,717	1,713	1,742	1,858	1,722	1,759	1,740	1,691	1,640	1,659	1,658
California.....	15,172	15,075	15,118	15,087	14,694	14,975	15,323	15,637	15,646	15,272	15,122	15,112	15,008
Colorado.....	115	106	109	109	115	109	118	120	118	118	123	121	118
Illinois.....	5,329	4,957	4,929	4,984	5,057	5,371	5,347	5,464	5,568	5,571	5,606	5,554	5,541
Indiana.....	416	416	385	393	411	402	426	402	454	424	439	449	412
Kansas.....	6,155	6,114	6,033	6,068	6,111	6,297	6,248	6,317	6,176	5,990	6,225	6,212	6,072
Kentucky.....	1,426	1,352	1,384	1,362	1,497	1,465	1,524	1,516	1,411	1,373	1,435	1,453	1,343
Louisiana.....	7,918	7,760	7,786	7,741	7,779	7,894	8,007	8,165	8,233	7,974	7,943	7,866	7,872
Michigan.....	2,117	1,946	1,940	1,963	2,076	2,199	2,177	2,162	2,213	2,123	2,211	2,206	2,135
Mississippi.....	41	9	9	9	9	9	9	9	9	58	63	119	175
Missouri.....	11	10	10	10	10	11	12	10	11	11	12	10	10
Montana.....	630	527	512	570	622	631	675	665	683	645	706	669	650
New Mexico.....	1,435	1,440	1,360	1,396	1,496	1,528	1,447	1,479	1,442	1,437	1,423	1,376	1,374
New York.....	1,358	1,244	1,255	1,318	1,376	1,393	1,378	1,370	1,385	1,405	1,385	1,380	1,404
Ohio.....	1,665	1,661	1,671	1,665	1,663	1,666	1,692	1,693	1,751	1,733	1,712	1,666	1,632
Oklahoma.....	16,126	16,646	16,302	16,495	16,403	16,610	16,261	16,459	15,937	15,728	15,652	15,619	15,399
Pennsylvania.....	6,308	6,193	6,030	6,134	6,084	6,327	6,269	6,232	6,322	6,441	6,559	6,627	6,473
Tennessee.....	27	26	26	26	27	26	26	27	27	27	27	27	27
Texas.....	30,623	30,580	30,569	30,933	30,806	31,085	31,041	31,421	31,008	30,207	30,425	30,839	30,940
West Virginia.....	5,290	4,656	4,664	4,961	5,119	5,072	5,245	5,248	5,349	5,609	5,711	6,072	5,568
Wyoming.....	1,039	1,026	1,012	1,024	1,048	1,084	1,107	1,047	1,087	1,040	1,009	1,014	971
South Dakota, Utah, and Washington.....	21	19	19	19	19	24	25	27	19	19	19	33	27

<sup>1</sup>For definition of the industry see table 7, footnote 1; for explanation of term "type of operation" see table 7, footnote 1.

TABLE 15.—QUANTITY OF FUELS CONSUMED BY THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY KIND OF FUEL, BY TYPE OF OPERATION, AND BY STATE: 1939<sup>1</sup>

[For producing operations only]

TYPE OF OPERATION AND STATE	Anthracite (tons of 2,000 pounds)	Bituminous coal (tons of 2,000 pounds)	Fuel oil (barrels of 42 gallons)	Gasoline and kerosene (gallons)	Natural gas (thousands of cubic feet)
United States, total.....	782	5,465	2,161,981	17,659,972	284,343,025
TYPE OF OPERATION					
Oil-well operations only.....	689	2,438	1,297,665	11,934,284	176,489,450
Oil- and gas-well operations.....	90	1,768	651,730	5,185,770	100,378,905
Gas-well operations only.....	3	1,259	12,586	539,958	7,474,670
STATE					
Arkansas.....			7,614	89,484	7,682,774
California.....	2		632,946	3,767,482	54,837,390
Colorado.....			6,801	34,089	247,230
Illinois.....	88	1,608	73,010	1,670,180	4,350,245
Indiana.....	200	444	12,556	99,669	283,473
Kansas.....		147	57,044	1,242,919	7,116,278
Kentucky.....		186	1,611	125,998	875,124
Louisiana.....			740,687	985,913	40,528,958
Michigan.....	158	232	21,689	586,439	3,528,650
Mississippi.....			42,688	15,105	6,000
Missouri.....	3	10	200	13,752	8,017
Montana.....	245	98	3,518	121,263	1,397,767
New Mexico.....			89,528	255,844	4,384,310
New York.....	2	239	10,629	217,948	1,586,920
Ohio.....	15	114	350	305,520	1,555,701
Oklahoma.....		1,083	66,183	1,387,290	37,395,878
Pennsylvania.....	4	1,182	17,988	410,685	5,738,465
Tennessee.....					3,918
Texas.....	45		331,151	6,128,218	108,568,221
West Virginia.....		124	1,303	150,389	2,824,794
Wyoming.....			44,703	93,847	2,008,720
South Dakota, Utah, and Washington.....					36,194

<sup>1</sup> For definition of the industry see table 7, footnote 1; for explanation of term "type of operation" see table 7, footnote 1. Figures include, in addition to purchased fuels, those produced and consumed by the reporting companies. Figures for "Fuel oil" include crude petroleum. Figures for "Gasoline and kerosene" include natural gasoline and liquefied petroleum gases.

TABLE 16.—NUMBER AND HORSEPOWER RATING OF PRIME MOVERS AND ELECTRIC MOTORS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY TYPE OF OPERATION AND BY STATE: 1939<sup>1</sup>

[For producing operations only]

TYPE OF OPERATION AND STATE	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY										ELECTRIC MOTORS DRIVEN BY ENERGY GENERATED BY RE- PORTING COMPANIES	
	Aggregate horse- power	Total horse- power	Prime movers						Electric motors driven by pur- chased energy			
			Driving generators		Not driving generators		Ordinarily idle (included in pre- ceding columns)					
			Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower	Number	Horsepower
United States, total.....	3,386,341	2,956,834	1,518	58,328	74,266	2,898,506	3,625	187,765	22,335	429,507	4,109	70,639
TYPE OF OPERATION												
Oil-well operations only....	2,161,827	1,850,957	531	30,346	44,252	1,820,611	2,274	119,212	16,794	310,870	2,610	45,694
Oil- and gas-well operations..	1,143,737	1,025,974	936	27,256	28,928	998,718	1,240	63,245	5,511	117,763	1,454	24,717
Gas-well operations only....	80,777	79,903	51	728	3,068	79,177	111	5,308	30	874	45	228
STATE												
Arkansas.....	65,068	62,155	12	251	1,661	61,904	41	1,054	86	2,913	9	238
California.....	701,482	502,764	84	4,617	8,938	498,147	797	60,411	10,041	198,718	179	2,673
Colorado.....	5,771	5,533	4	48	197	5,485	14	341	29	238	2	6
Illinois.....	95,460	88,886	51	3,220	2,884	85,666	114	2,949	1,424	6,574	597	2,758
Indiana.....	8,317	7,941	1	6	299	7,935	9	81	5	376	.....	.....
Kansas.....	267,172	230,127	149	3,607	6,816	226,520	138	6,382	1,661	37,045	245	5,156
Kentucky.....	22,819	22,618	11	170	973	22,648	22	483	1	1	.....	.....
Louisiana.....	215,074	203,062	247	5,787	3,247	197,275	367	23,763	459	12,012	66	2,875
Michigan.....	47,127	44,870	47	943	1,771	43,727	53	1,499	195	2,457	101	596
Mississippi.....	1,360	1,360	.....	.....	13	1,360	.....	.....	.....	.....	.....	.....
Missouri.....	632	623	.....	.....	18	623	1	12	4	9	.....	.....
Montana.....	20,242	19,404	20	298	501	19,108	26	658	81	638	4	38
New Mexico.....	30,225	30,058	54	1,241	653	28,817	24	654	13	167	39	890
New York.....	32,627	31,372	5	765	1,228	30,607	11	664	115	1,255	22	551
Ohio.....	60,383	60,382	18	117	2,778	60,265	69	1,483	2	1	2	1
Oklahoma.....	650,968	617,155	188	15,122	13,363	602,033	471	23,289	1,038	33,813	1,201	28,732
Pennsylvania.....	170,871	161,532	34	2,562	7,042	158,970	172	4,945	669	9,339	425	1,695
Tennessee.....	403	403	.....	.....	11	403	.....	.....	.....	.....	.....	.....
Texas.....	862,583	753,988	531	18,110	16,880	735,878	1,136	54,310	4,864	108,595	1,164	23,810
West Virginia.....	101,133	97,800	33	530	4,568	97,270	94	2,298	351	3,333	27	171
Wyoming.....	26,241	14,418	29	934	394	13,484	64	2,409	1,297	11,823	26	279
South Dakota, Utah, and Washington.....	383	383	.....	.....	11	383	2	100	.....	.....	.....	.....

<sup>1</sup> For definition of the industry see table 7, footnote 1; for explanation of term "type of operation" see table 7, footnote 1. Figures represent equipment in use or available for use at the end of the year.

## MINERAL INDUSTRIES

TABLE 17.—SELECTED STATISTICS FOR INCORPORATED AND FOR UNINCORPORATED OPERATING COMPANIES IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

[For producing operations only]

STATE AND TYPE OF OWNERSHIP	Number of operating companies	Number of oil and gas wells producing, December 31, 1939	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
				Total	Wage earners (average for the year)	Salaryed employees	Proprietors and firm members			
							Total	Performing manual labor		
United States, total.....	7,782	347,645	\$1,375,953,576	2 141,592	105,166	230,322	6,104	1,304	\$155,170,484	2\$78,792,331
Incorporated.....	3,744	284,360	1,203,709,730	2 112,712	85,073	227,639	.....	.....	132,952,054	2 74,183,498
Unincorporated.....	4,038	83,285	172,243,846	2 28,880	20,093	2,683	6,104	1,304	22,218,430	2 4,608,835
Arkansas, total.....	129	2,987	17,020,274	1,989	1,722	178	89	26	2,661,842	458,901
Incorporated.....	83	2,012	13,298,999	1,347	1,212	135	.....	.....	1,995,255	370,627
Unincorporated.....	68	975	3,723,275	642	510	43	89	26	666,587	88,274
California, total.....	959	16,657	250,424,351	19,951	15,172	4,373	406	117	27,296,602	12,050,218
Incorporated.....	643	15,146	236,445,278	16,021	13,933	4,088	.....	.....	25,625,877	11,498,222
Unincorporated.....	316	1,511	11,979,073	1,930	1,239	285	406	117	1,670,725	551,994
Colorado, total.....	13	223	1,391,229	269	115	147	7	.....	182,155	420,375
Incorporated.....	10	151	1,324,157	251	106	145	.....	.....	170,980	417,255
Unincorporated.....	3	72	67,072	18	9	2	7	.....	11,175	3,720
Illinois, total.....	277	16,981	96,618,028	6,653	5,329	1,108	216	25	8,031,009	2,334,884
Incorporated.....	129	14,833	83,095,379	5,066	4,046	1,020	.....	.....	6,208,335	2,208,186
Unincorporated.....	148	2,148	13,522,649	1,587	1,283	88	216	25	1,822,674	126,718
Indiana, total.....	75	1,885	1,694,195	600	418	147	35	9	465,428	349,552
Incorporated.....	49	1,572	1,285,908	455	324	131	.....	.....	365,584	337,860
Unincorporated.....	26	313	408,289	145	94	16	35	9	99,842	11,692
Kansas, total.....	546	20,238	63,018,725	7,680	6,155	1,119	406	83	7,902,017	2,584,586
Incorporated.....	270	15,053	53,598,808	5,584	4,676	908	.....	.....	6,551,687	2,244,972
Unincorporated.....	276	5,185	9,419,919	2,096	1,479	211	406	83	1,350,330	319,594
Kentucky, total.....	96	9,868	9,388,020	1,617	1,426	151	40	7	1,248,270	330,317
Incorporated.....	68	7,232	7,721,396	1,156	1,034	122	.....	.....	874,989	285,645
Unincorporated.....	28	2,636	1,666,624	461	392	29	40	7	371,301	44,672
Louisiana, total.....	411	6,529	106,663,668	9,877	7,918	1,556	203	38	12,920,776	4,032,617
Incorporated.....	251	5,572	95,325,844	8,525	7,083	1,442	.....	.....	11,851,810	3,786,995
Unincorporated.....	160	957	11,337,824	1,152	835	114	203	38	1,069,166	245,622
Michigan, total.....	326	3,002	22,363,523	2,847	2,117	497	233	22	2,746,401	997,029
Incorporated.....	204	2,410	17,898,848	2,062	1,635	427	.....	.....	2,203,508	918,992
Unincorporated.....	122	592	4,464,675	785	482	70	233	22	542,893	78,037
Mississippi, total.....	19	47	712,093	60	41	18	1	.....	58,984	31,232
Incorporated.....	12	30	430,038	58	40	18	.....	.....	58,504	31,232
Unincorporated.....	7	17	282,055	2	1	.....	1	.....	480	.....
Missouri, total.....	7	132	58,858	602	11	583	8	5	13,191	1,500,473
Incorporated.....	4	39	24,558	585	8	579	.....	.....	8,783	1,499,923
Unincorporated.....	3	93	34,302	17	5	4	8	5	4,408	550
Montana, total.....	170	2,067	6,838,878	938	630	208	100	38	904,356	298,155
Incorporated.....	89	1,574	5,183,882	574	414	160	.....	.....	613,455	252,779
Unincorporated.....	81	493	1,654,996	364	216	48	100	38	290,901	45,376
New Mexico, total.....	142	2,981	32,070,595	1,775	1,435	265	75	21	2,447,132	631,623
Incorporated.....	100	2,628	30,483,540	1,514	1,285	249	.....	.....	2,187,588	616,096
Unincorporated.....	42	353	1,587,055	261	170	16	75	21	259,544	15,527
New York, total.....	190	14,729	12,083,589	1,955	1,358	303	294	69	1,722,486	892,331
Incorporated.....	87	8,920	8,947,485	1,155	893	282	.....	.....	1,186,685	839,553
Unincorporated.....	123	5,809	3,136,104	800	465	41	294	69	535,801	52,778
Ohio, total.....	227	15,011	9,421,588	2,597	1,685	713	199	81	1,958,357	1,425,737
Incorporated.....	99	10,305	8,097,832	1,900	1,210	690	.....	.....	1,543,685	1,406,975
Unincorporated.....	128	4,706	1,323,756	697	475	23	199	81	414,672	18,762
Oklahoma, total.....	1,094	50,384	164,702,209	22,749	16,126	5,903	720	137	22,132,570	16,066,851
Incorporated.....	534	40,828	147,693,859	18,705	13,139	5,566	.....	.....	19,493,785	15,419,151
Unincorporated.....	560	9,556	17,008,350	4,044	2,987	337	720	137	2,638,805	647,700
Pennsylvania, total.....	726	65,484	45,092,696	8,485	6,308	1,386	791	250	8,066,638	3,545,342
Incorporated.....	319	41,286	34,417,210	5,634	4,426	1,208	.....	.....	5,991,936	3,327,102
Unincorporated.....	507	24,218	10,675,486	2,851	1,882	178	791	250	2,074,702	218,240
Tennessee <sup>3</sup> .....	8	41	44,878	32	27	5	.....	.....	22,141	6,436
Texas, total.....	2,695	89,568	492,198,843	43,246	30,823	10,573	1,850	271	46,559,650	28,737,967
Incorporated.....	1,264	69,079	414,948,115	33,387	23,923	9,484	.....	.....	38,699,655	28,649,657
Unincorporated.....	1,431	20,489	77,250,728	9,859	6,900	1,109	1,850	271	7,859,795	2,088,310
West Virginia, total.....	419	26,137	23,020,022	6,418	5,290	706	422	104	6,045,183	1,356,057
Incorporated.....	212	23,086	20,911,186	5,304	4,656	648	.....	.....	5,556,486	1,322,219
Unincorporated.....	207	3,071	2,108,836	1,114	634	58	422	104	488,677	33,838
Wyoming, total.....	68	2,673	20,875,984	1,386	1,039	338	9	1	1,763,862	694,364
Incorporated.....	58	2,582	20,343,226	1,335	1,004	331	.....	.....	1,718,110	682,688
Unincorporated.....	10	91	532,758	51	35	7	9	1	45,752	11,676
South Dakota, Utah, and Washington <sup>3</sup> .....	4	21	231,530	36	21	15	.....	.....	23,456	22,156

<sup>1</sup>For definition of the industry see table 7, footnote 1.<sup>2</sup>Totals for the United States include statistics for central-office employees of incorporated companies in Florida, Iowa, Maryland, Minnesota, Nebraska, New Jersey, Oregon, and Rhode Island, and for unincorporated companies in Maryland and Minnesota.<sup>3</sup>Incorporated only; no unincorporated operating companies were reported.

## CRUDE PETROLEUM AND NATURAL GAS

163

TABLE 18.—SELECTED STATISTICS FOR OPERATIONS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK AND BY STATE: 1939<sup>1</sup>  
 [For producing operations only]

STATE AND HOURS PER WEEK	Number of wells	Crude petroleum produced (barrels)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
				Total	Wage earners	Salaried employees	Proprietors and firm members			
							Total	Performing manual labor		
United States, total.....	347,645	1,228,133,816	\$1,375,953,576	<sup>2</sup> 141,592	105,166	<sup>2</sup> 30,322	6,104	1,304	\$155,170,484	<sup>2</sup> \$78,792,331
1-34.....	2,782	6,848,812	7,457,959	1,259	859	237	163	14	1,117,614	727,280
35.....	1,895	2,711,063	2,936,433	721	479	96	148	16	440,654	136,200
36-39.....	57,358	423,516,804	457,254,040	31,501	26,114	5,318	69	7	46,835,387	13,406,576
40.....	111,200	325,590,686	389,405,930	37,050	30,824	5,401	825	124	48,028,692	13,531,361
41-42.....	64,466	218,678,451	229,320,783	22,169	18,040	3,282	847	75	24,497,374	8,688,408
43-44.....	34,662	107,044,657	115,927,724	11,823	9,739	1,669	415	60	13,320,248	5,077,748
45-47.....	1,358	1,814,015	2,302,581	311	254	48	9	3	289,639	97,291
48.....	9,403	18,054,984	20,014,405	2,806	2,095	469	222	39	2,590,330	1,110,690
49-53.....	2,478	545,387	2,310,289	358	234	110	12	3	314,381	263,134
54-59.....	1,879	12,100,045	11,972,737	1,553	1,200	278	75	14	1,567,389	593,095
60 and over.....	389	982,189	975,527	153	118	25	12	2	127,259	34,457
Unclassified.....	59,797	110,246,963	136,075,188	<sup>2</sup> 31,890	15,212	<sup>2</sup> 13,369	3,309	947	16,041,537	<sup>2</sup> 35,108,091
Arkansas, total.....	2,987	20,914,947	17,020,274	1,989	1,722	178	89	26	2,661,642	458,901
35.....	25	41,182	29,275	21	15	2	4	2	7,819	180
36-39.....	597	4,072,658	3,304,521	437	400	37	.....	.....	753,770	100,177
40.....	463	1,902,238	1,866,875	272	228	28	18	3	342,819	81,034
41-42.....	778	5,937,870	4,633,314	408	361	35	12	6	580,351	84,370
43-44.....	453	5,507,325	4,159,078	384	322	33	9	1	456,475	83,145
45-47.....	50	.....	80,264	8	6	2	.....	.....	1,036	817
48.....	45	322,447	259,654	29	26	1	2	2	33,800	2,700
49-53.....	15	22,708	14,703	8	8	.....	.....	.....	8,206	.....
54-59.....	4	56,250	53,540	6	5	1	.....	.....	8,348	500
Unclassified.....	539	3,052,291	2,689,052	436	353	39	44	12	471,218	125,898
California, total.....	16,657	223,904,320	250,424,351	19,951	15,172	4,373	406	117	27,296,602	12,050,216
1-34.....	175	1,953,704	2,311,312	345	296	38	11	.....	563,711	108,008
35.....	23	93,735	104,480	23	16	3	4	1	12,684	4,200
36-39.....	9,442	132,523,774	154,899,188	10,176	8,639	1,535	2	.....	16,520,842	4,228,831
40.....	2,519	35,273,931	38,337,224	3,445	2,757	639	49	6	5,188,802	1,879,690
41-42.....	969	10,533,821	11,564,033	1,158	933	209	16	3	1,435,340	543,295
43-44.....	1,153	21,660,911	21,443,985	1,384	1,071	280	33	4	1,827,853	839,212
45-47.....	29	921,777	1,075,661	53	34	19	.....	.....	84,525	48,452
48.....	238	2,804,225	2,529,321	380	281	93	28	1	427,360	242,388
49-53.....	69	.....	.....	.....	.....	.....	.....	.....	.....	.....
54-59.....	2	1,002,875	784,449	126	93	27	6	1	101,911	45,771
60 and over.....	2,038	17,135,567	17,374,700	2,861	1,072	1,530	259	101	1,173,574	4,110,171
Unclassified.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colorado, total.....	223	1,375,609	1,391,229	289	115	147	7	.....	182,155	420,975
36-39.....	53	1,024,404	988,440	61	55	6	.....	.....	88,928	15,274
40.....	9	.....	52,505	16	16	.....	.....	.....	28,115	.....
41-42.....	54	145,673	140,228	56	19	37	.....	.....	33,614	87,840
43-44.....	10	.....	29,030	9	8	.....	1	.....	8,816	.....
48.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unclassified.....	95	176,762	183,028	127	17	104	6	.....	24,684	317,861
Illinois, total.....	18,981	93,593,753	96,618,028	6,653	5,329	1,108	216	25	8,031,009	2,334,884
1-34.....	30	149,390	122,925	47	29	2	16	1	26,268	39,358
35.....	41	42,528	40,626	26	8	2	16	.....	5,388	162
36-39.....	1,930	35,151,468	37,822,641	949	649	300	.....	.....	1,253,393	651,461
40.....	3,321	26,651,472	28,178,767	1,773	1,476	270	27	2	2,266,604	514,312
41-42.....	8,618	14,703,977	13,750,592	1,523	1,309	183	31	6	1,869,614	323,200
43-44.....	647	2,474,889	2,273,670	250	207	31	12	.....	244,659	59,773
45-47.....	8	141,317	128,869	10	7	3	.....	.....	11,649	5,000
48.....	148	2,836,121	2,321,812	142	96	37	9	.....	96,431	73,928
49-53.....	25	382,280	302,621	30	25	1	4	.....	42,436	1,200
54-59.....	8	165,484	125,254	8	7	.....	1	.....	5,343	.....
60 and over.....	2,205	10,694,827	11,549,251	1,895	1,516	279	100	16	2,209,224	668,490
Unclassified.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Indiana, total.....	1,885	1,644,555	1,694,195	600	418	147	35	9	465,426	349,552
1-34.....	20	45,257	42,995	22	2	20	.....	.....	3,478	62,167
35.....	26	55,532	55,289	14	7	2	5	1	3,598	788
36-39.....	18	141,549	141,084	18	12	6	.....	.....	24,891	16,927
40.....	418	69,150	65,696	66	58	8	2	.....	58,447	8,152
41-42.....	487	270,072	266,326	74	68	6	.....	.....	80,175	10,030
43-44.....	79	257,889	239,290	34	30	3	1	.....	41,532	8,900
45-47.....	14	2,688	6,487	9	8	1	2	2	5,824	600
48.....	165	.....	26,611	9	9	.....	.....	.....	8,409	.....
49-53.....	24	61,829	51,280	18	9	1	8	.....	8,647	300
54-59.....	634	710,589	758,877	336	219	100	17	6	232,425	241,690
Unclassified.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kansas, total.....	20,238	57,324,987	63,018,725	7,690	6,155	1,119	406	83	7,902,017	2,564,566
1-34.....	78	116,950	121,887	45	37	1	7	1	27,880	780
35.....	82	219,030	236,328	79	57	5	17	1	40,255	10,100
36-39.....	3,898	14,160,251	15,077,082	1,313	1,072	231	10	.....	1,782,086	547,717
40.....	5,349	15,803,805	16,545,510	1,852	1,493	282	77	10	2,161,813	665,846
41-42.....	4,463	13,754,356	14,722,917	1,807	1,545	199	83	8	1,912,011	453,782
43-44.....	2,284	6,399,247	8,571,142	935	775	132	28	3	940,615	343,828
45-47.....	26	.....	7,836	9	4	3	2	.....	4,434	3,800
48.....	232	690,340	699,909	128	83	16	29	4	78,477	19,403
49-53.....	109	98,252	110,494	21	17	3	1	.....	18,435	7,270
54-59.....	82	346,484	344,351	66	58	7	1	.....	59,213	9,028
60 and over.....	32	.....	14,304	18	16	2	.....	.....	17,244	1,845
Unclassified.....	3,603	5,736,252	6,566,905	1,407	998	238	171	56	659,794	501,367

See footnotes at end of table.



## MINERAL INDUSTRIES

TABLE 18.—SELECTED STATISTICS FOR OPERATIONS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK AND BY STATE: 1939<sup>1</sup>—Con.  
[For producing operations only]

STATE AND HOURS PER WEEK	Number of wells	Crude petroleum produced (barrels)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
				Total	Wage earners	Salaried employees	Proprietors and firm members			
							Total	Performing manual labor		
Kentucky, total.....	9,868	4,206,549	\$ 9,388,020	1,617	1,426	151	40	7	\$1,246,270	\$330,317
1-34.....	358	316,804	327,742	69	58	9	2	.....	48,988	18,874
35.....	381	98,563	102,701	48	47	1	.....	.....	35,245	3,600
36-39.....	909	735,421	797,882	161	148	11	2	.....	167,042	37,006
40.....	2,363	699,498	3,968,415	442	414	20	8	2	368,173	43,297
41-42.....	2,981	1,199,281	1,399,188	320	291	21	8	.....	270,503	57,095
43-44.....	558	314,914	332,152	110	108	1	1	.....	94,186	2,760
45.....	5	17,982	18,220	7	4	3	.....	.....	5,090	2,719
Unclassified.....	2,317	826,268	2,451,720	460	356	85	19	5	257,043	165,166
Louisiana, total.....	6,529	92,056,755	106,663,668	9,677	7,918	1,556	203	38	12,920,778	4,032,617
1-34.....	5	28,846	21,285	14	8	.....	8	.....	4,561	.....
35.....	60	201,937	213,559	58	38	.....	10	.....	51,597	8,223
36-39.....	1,908	34,638,455	37,510,894	3,498	3,086	409	1	.....	5,402,398	1,014,104
40.....	2,223	23,695,380	31,911,749	2,572	2,197	347	25	3	3,721,924	809,690
41-42.....	745	16,489,803	17,416,426	780	619	121	20	.....	958,896	289,914
43-44.....	553	11,293,632	11,893,416	1,230	1,083	133	14	2	1,782,878	374,544
45.....	68	555,819	519,662	104	85	13	6	2	106,730	43,380
46-53.....	4	44,129	65,960	10	9	.....	1	.....	3,298	7,500
54-59.....	75	733,108	686,192	102	91	10	1	1	126,183	28,328
60 and over.....	16	433,634	387,745	20	15	4	1	.....	19,115	7,846
Unclassified.....	874	3,564,012	6,037,000	1,313	687	510	116	29	765,196	1,451,090
Michigan, total.....	3,002	23,282,256	22,363,523	2,847	2,117	497	233	22	2,746,401	997,029
1-34.....	8	97,279	87,465	10	7	1	2	.....	6,710	800
35.....	37	121,581	107,163	41	26	5	10	.....	25,097	5,880
36-39.....	33	446,802	416,464	23	17	8	.....	.....	19,762	12,328
40.....	765	6,862,239	6,436,379	714	592	97	25	2	836,564	174,971
41-42.....	788	7,495,401	6,867,310	790	642	127	21	.....	864,687	302,880
43-44.....	243	2,892,982	2,632,520	250	198	39	13	2	258,953	90,332
45-47.....	4	35,026	36,325	4	2	1	1	1	3,166	375
48.....	187	758,024	698,932	170	114	32	24	3	120,770	66,729
49-53.....	6	15,041	14,516	4	2	2	.....	.....	3,369	1,658
54-59.....	34	191,049	185,362	23	11	5	7	.....	12,140	4,582
60 and over.....	26	65,834	61,839	26	20	6	.....	.....	24,266	6,520
Unclassified.....	871	4,301,000	4,641,248	792	486	176	130	14	572,917	329,476
Mississippi, total.....	47	101,977	712,093	60	41	18	1	.....	58,984	31,232
40.....	6	64,193	60,341	28	27	1	.....	.....	39,856	740
45-47.....	3	37,784	31,802	7	5	2	.....	.....	4,024	1,107
48.....	9	.....	244,491	6	1	5	.....	.....	1,824	9,925
Unclassified.....	29	.....	375,659	19	8	10	1	.....	13,280	19,480
Missouri, total.....	132	26,409	58,858	602	11	583	8	5	13,191	1,500,473
41-42.....	42	5,959	4,791	4	2	1	1	1	1,417	110
Unclassified.....	90	20,460	54,067	598	9	582	7	4	11,774	1,500,363
Montana, total.....	2,067	5,643,735	6,838,678	938	630	208	100	38	904,356	298,155
1-34.....	52	180,371	160,603	39	22	7	10	.....	22,099	10,699
35.....	41	121,303	105,456	28	12	11	3	.....	10,351	7,777
36-39.....	161	850,129	907,061	73	60	13	.....	.....	104,429	31,628
40.....	351	756,778	804,884	119	81	21	17	6	124,680	28,649
41-42.....	222	1,269,715	1,807,758	139	120	18	1	.....	195,300	54,406
43-44.....	128	541,686	524,988	52	49	1	2	.....	82,405	2,700
45.....	387	439,017	831,958	85	59	18	8	4	74,977	30,734
54-59.....	166	405,347	378,243	90	64	22	4	.....	100,944	28,018
Unclassified.....	579	1,269,389	1,317,733	315	183	97	55	28	189,171	103,546
New Mexico, total.....	2,981	37,575,278	32,070,595	1,775	1,435	265	75	21	2,447,132	631,623
1-34.....	2	10,572,559	9,286,112	300	249	51	.....	.....	435,417	123,162
36-39.....	630	12,122,369	10,052,294	850	554	83	13	.....	1,013,791	208,145
40.....	872	9,908,916	7,641,013	388	328	54	4	.....	528,273	130,659
41-42.....	670	2,732,038	2,197,854	105	96	9	.....	.....	159,201	20,976
43-44.....	225	18,000	12,230	3	1	.....	2	2	250	.....
45-47.....	4	394,867	339,555	72	54	6	12	4	87,579	4,717
48.....	52	193,382	135,030	45	41	4	.....	.....	69,278	5,244
54-59.....	22	2,635,127	2,406,507	214	112	58	44	15	155,345	140,720
Unclassified.....	504	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York, total.....	14,729	3,898,376	12,083,589	1,955	1,358	303	294	69	1,722,486	892,331
1-34.....	12	750	1,500	3	1	.....	2	.....	870	.....
35.....	69	15,170	32,589	14	8	.....	8	2	4,797	.....
36-39.....	153	37,163	165,776	34	15	6	13	4	19,878	1,733
40.....	4,773	1,842,589	5,535,596	537	458	23	58	8	626,344	25,620
41-42.....	1,175	289,222	891,937	148	111	10	27	4	138,210	13,774
43-44.....	4,218	925,999	2,059,730	466	367	53	46	13	486,658	141,934
45-47.....	6	.....	275,136	5	5	.....	.....	.....	7,547	.....
48.....	757	160,922	343,697	63	48	3	12	3	47,755	3,629
60 and over.....	15	.....	27,836	9	8	3	.....	.....	7,704	3,060
Unclassified.....	3,551	626,561	2,749,992	676	341	205	130	35	382,723	702,561
Ohio, total.....	15,011	2,030,418	9,421,588	2,597	1,685	713	199	81	1,958,357	1,425,737
1-34.....	79	17,263	31,541	19	15	3	1	1	14,123	834
35.....	69	3,291	41,244	21	10	.....	11	1	4,940	.....
36-39.....	78	2,764	35,214	19	16	3	.....	.....	18,857	2,475
40.....	6,698	1,112,679	6,329,100	1,067	868	187	12	5	1,216,596	423,018
41-42.....	2,654	217,075	686,603	230	180	40	10	2	166,398	76,389
43-44.....	146	16,367	348,155	37	23	13	1	1	20,629	35,923
45-47.....	833	168,480	155,417	106	101	4	1	.....	94,242	5,100
48.....	522	60,573	404,509	118	86	24	8	3	94,078	43,664
49-53.....	80	4,890	4,401	4	3	.....	1	.....	2,807	.....
Unclassified.....	3,852	427,016	1,585,404	976	383	439	154	68	325,687	838,334

See footnotes at end of table.

## CRUDE PETROLEUM AND NATURAL GAS

165

TABLE 18.—SELECTED STATISTICS FOR OPERATIONS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK AND BY STATE: 1939<sup>1</sup>—Con.  
[For producing operations only]

STATE AND HOURS PER WEEK	Number of wells	Crude petroleum produced (barrels)	Value of all products	NUMBER OF PERSONS ENGAGED					Wages	Salaries
				Total	Wage earners	Salaried employees	Proprietors and firm members			
							Total	Performing manual labor		
Oklahoma, total.....	50,384	153,144,020	\$164,702,209	22,749	16,126	5,903	720	137	\$22,132,570	\$16,066,851
1-34.....	431	892,948	987,055	154	130	12	12	2	105,193	16,376
35.....	209	224,576	228,181	91	80	17	14	1	41,431	28,465
36-39.....	13,669	45,559,903	49,970,470	4,978	4,243	728	7	1	7,254,073	1,944,341
40.....	11,759	44,037,809	46,740,906	5,056	4,315	646	75	10	6,287,823	1,683,147
41-42.....	9,350	33,802,965	35,983,687	3,917	3,229	505	183	10	4,172,730	1,177,656
43-44.....	6,433	15,208,293	15,994,578	2,147	1,795	299	53	7	2,041,680	1,110,556
45-47.....	155	119,372	130,256	45	40	4	1	.....	44,987	8,900
48.....	808	1,746,816	1,889,274	311	232	61	18	5	274,029	168,123
49-53.....	21	6,666	13,412	4	3	1	.....	.....	4,860	1,200
54-59.....	111	568,692	643,258	260	202	46	12	3	197,539	61,691
60 and over.....	110	7,461	7,629	10	7	.....	3	.....	4,414	.....
Unclassified.....	7,328	10,970,519	12,133,503	5,796	1,870	3,584	342	96	1,704,011	9,666,697
Pennsylvania, total.....	65,484	14,059,608	45,092,696	8,485	6,308	1,386	791	250	8,068,638	3,545,342
1-34.....	493	24,588	49,243	19	14	1	4	1	10,779	2,300
35.....	332	40,078	82,469	37	29	1	7	2	27,173	1,700
36-39.....	830	218,574	669,182	92	70	11	11	.....	77,304	22,308
40.....	29,799	9,397,583	24,870,104	3,843	3,154	334	155	35	4,492,143	821,021
41-42.....	6,782	1,215,358	3,645,107	806	643	67	98	16	772,481	138,404
43-44.....	8,568	1,080,322	5,007,793	884	700	74	110	24	955,650	145,498
45-47.....	134	6,562	11,889	8	5	2	1	.....	3,547	1,280
48.....	4,014	217,176	793,695	292	249	23	20	1	274,763	48,318
49-53.....	1,987	28,962	1,782,005	242	144	92	6	2	207,771	209,282
54-59.....	49	9,490	39,195	14	8	1	5	2	5,775	300
60 and over.....	38	.....	44,739	7	3	2	2	.....	4,400	1,283
Unclassified.....	12,458	1,820,915	8,097,255	2,441	1,289	778	374	163	1,254,842	2,153,668
Tennessee, total.....	41	43,862	44,878	32	27	5	.....	.....	22,141	6,436
36-39.....	19	10,662	11,678	8	7	1	.....	.....	3,693	936
43-44.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Unclassified.....	22	33,200	33,200	24	20	4	.....	.....	18,248	5,500
Texas, total.....	89,568	467,582,948	492,198,843	43,246	30,823	10,573	1,850	271	46,559,650	28,737,987
1-34.....	770	2,953,998	3,048,036	369	182	132	55	3	222,741	456,180
35.....	445	1,388,195	1,414,488	188	130	37	21	.....	158,889	83,227
36-39.....	20,823	135,157,918	137,410,593	8,626	8,765	1,818	23	1	11,910,838	4,473,305
40.....	24,101	142,338,701	154,448,141	11,236	8,843	2,152	241	25	14,902,616	5,612,239
41-42.....	20,835	92,000,801	96,317,813	8,765	8,924	1,504	337	18	9,628,146	4,596,727
43-44.....	7,733	33,043,218	35,205,704	3,320	2,702	532	86	3	3,676,190	1,738,438
45-47.....	86	367,697	353,896	49	43	5	1	.....	46,137	13,280
48.....	1,693	6,773,827	7,054,938	730	537	151	42	3	720,626	344,335
49-53.....	89	324,719	277,887	54	39	11	4	1	59,226	56,226
54-59.....	1,215	8,201,478	8,408,518	775	582	154	29	5	836,628	413,735
60 and over.....	137	239,294	254,485	48	40	5	3	.....	41,773	9,883
Unclassified.....	11,841	44,783,102	46,004,344	9,088	4,008	4,072	1,008	212	4,354,840	10,958,412
West Virginia, total.....	26,137	3,251,055	23,020,022	6,418	5,290	706	422	104	6,045,183	1,356,057
1-34.....	251	52,485	147,732	100	57	8	35	6	58,585	4,704
35.....	55	14,582	122,765	36	18	2	16	5	13,390	1,920
36-39.....	1,008	244,031	518,585	135	135	.....	.....	.....	189,536	.....
40.....	15,327	2,038,003	12,465,786	3,470	3,209	240	21	7	4,247,861	521,810
41-42.....	2,061	246,092	1,507,977	442	364	62	16	1	308,045	102,367
43-44.....	1,160	178,697	1,109,294	191	170	16	5	.....	205,772	22,611
45-47.....	20	.....	23,100	4	1	3	.....	.....	1,095	9,420
48.....	230	8,511	717,828	147	141	2	4	2	121,394	5,400
49-53.....	8,025	470,474	6,406,995	1,893	1,195	373	325	84	922,505	687,825
Unclassified.....	2,673	22,269,068	20,875,984	1,368	1,039	336	9	1	1,783,862	694,364
Wyoming, total.....	1,401	7,788,984	7,340,441	607	458	149	.....	.....	833,720	189,285
36-39.....	58	522,129	534,121	102	78	23	1	.....	108,627	51,780
40.....	794	10,192,094	10,085,745	436	352	83	1	.....	605,173	243,511
41-42.....	73	2,508,784	1,922,891	56	36	20	.....	.....	59,280	56,318
43-44.....	12	247,559	124,415	11	11	.....	.....	.....	16,639	.....
45-47.....	3	13,534	6,318	2	2	.....	.....	.....	2,449	.....
48.....	5	6,629	6,076	3	1	2	.....	.....	900	420
49-53.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
60 and over.....	327	991,475	857,977	169	101	61	7	1	138,674	153,070
Unclassified.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
South Dakota, Utah, and Washington, total.....	21	1,349	231,530	36	21	15	.....	.....	23,456	22,156
40.....	6	.....	210,757	10	10	.....	.....	.....	19,294	.....
Unclassified.....	15	1,349	20,773	26	11	15	.....	.....	4,162	22,156

<sup>1</sup> For definition of the industry see table 7, footnote 1. Each operating company was requested to submit separate reports for each State in which it operated or drilled wells in 1939, covering all of its oil-well activities in the State in one report and all of its gas-well activities in another report. Each report was classified by number of hours in the full-time workweek reported for wage earners engaged in operating and maintaining wells; reports on which number of hours was not reported for such wage earners and reports on which no wage earners were reported as engaged in such work are included in "Unclassified."

<sup>2</sup> Includes statistics for 30 employees at central offices in Florida, Iowa, Maryland, Minnesota, Nebraska, New Jersey, Oregon, and Rhode Island; these employees were paid \$44,550.

TABLE 19.—PRINCIPAL STATISTICS FOR NONPRODUCING OPERATIONS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	Alabama and Florida	Arkansas	California	Illinois	Indiana	Iowa and Missouri	Kansas	Kentucky and Tennessee	Louisiana
Number of operating companies.....	<sup>2</sup> 307	3	7	48	30	28	23	12	5	15
Number of persons engaged, total.....	753	.....	20	119	45	47	14	26	4	139
Wage earners (average for the year, including inactive periods).....	339	.....	10	74	18	14	4	12	2	78
Salaried employees.....	<sup>4</sup> 224	.....	6	28	11	8	1	3	.....	<sup>4</sup> 61
Proprietors and firm members (not applicable to corporations).....	190	.....	4	17	16	25	9	11	2	.....
Performing manual labor.....	42	.....	.....	3	4	7	1	2	.....	.....
Principal expenses designated below, total.....	\$4,916,651	\$80,969	\$185,792	\$759,666	\$425,893	\$272,810	\$91,312	\$127,916	\$44,490	\$900,619
Wages.....	\$529,107	.....	\$14,041	\$135,146	\$23,097	\$22,363	\$7,155	\$22,063	\$2,990	\$114,848
Salaries.....	<sup>4</sup> \$406,983	.....	\$9,899	\$45,503	\$24,423	\$15,172	\$1,448	\$1,980	.....	<sup>4</sup> \$139,005
Supplies and materials.....	\$500,535	\$3,786	\$2,213	\$58,502	\$30,692	\$15,659	\$1,253	\$7,871	\$500	\$233,256
Fuel.....	\$186,927	.....	\$368	\$29,902	\$12,659	\$6,015	\$250	\$738	\$500	\$86,239
Purchased electric energy.....	\$7,148	.....	.....	\$755	\$40	.....	.....	.....	.....	.....
Contract work.....	\$3,285,951	\$57,183	\$159,281	\$489,858	\$334,982	\$213,581	\$81,208	\$95,244	\$40,500	\$327,271
Cost of buildings, machinery, and equipment erected or installed during year, total.....	\$1,001,932	.....	\$22,475	\$118,762	\$28,486	\$13,675	\$12,120	\$27,996	\$3,826	\$82,874
Buildings.....	\$169,294	.....	.....	\$18,976	.....	.....	\$2,892	.....	.....	.....
Machinery and equipment, total.....	\$832,638	.....	\$22,475	\$99,786	\$28,486	\$13,675	\$9,228	\$27,996	\$3,826	\$82,874
Purchased in new condition.....	\$750,798	.....	\$22,475	\$65,370	\$24,370	\$13,175	\$8,779	\$20,132	\$3,826	\$82,874
Purchased in used condition.....	\$81,840	.....	.....	\$34,416	\$4,116	\$500	\$2,449	\$7,864	.....	.....
Number of wells drilled and completed in 1939, total.....	434	.....	7	32	56	40	29	15	8	21
Oil wells.....	28	.....	.....	1	5	2	.....	.....	2	.....
Gas wells.....	26	.....	.....	.....	5	.....	.....	3	3	3
Dry holes.....	380	.....	7	31	51	33	29	12	3	18
Drilled on contract for reporting companies, total.....	302	.....	7	19	44	21	26	9	7	14
Oil wells.....	19	.....	.....	.....	2	.....	.....	.....	2	.....
Gas wells.....	15	.....	.....	.....	.....	.....	.....	.....	3	3
Dry holes.....	288	.....	7	19	42	21	26	9	2	11
Drilled by reporting companies for their own account, total.....	132	.....	.....	13	12	19	3	6	1	7
Oil wells.....	9	.....	.....	1	3	2	.....	.....	.....	.....
Gas wells.....	11	.....	.....	.....	5	.....	.....	3	.....	.....
Dry holes.....	112	.....	.....	12	9	12	3	3	1	7
Footage of wells drilled and completed in 1939, total.....	1,196,694	.....	30,179	109,207	128,256	64,912	47,519	38,787	13,541	132,639
Drilled on contract for reporting companies.....	824,244	.....	30,179	59,038	104,808	38,827	44,019	26,030	10,329	74,990
Drilled by reporting companies for their own account.....	372,450	.....	.....	50,169	23,448	26,285	3,500	12,737	3,212	57,649
Cost of drilling and equipping wells completed in 1939.....	\$4,618,515	.....	\$170,709	\$789,784	\$442,907	\$197,682	\$92,948	\$207,703	\$49,947	\$866,096
Number of man-hours worked by wage earners, total.....	595,703	.....	21,191	150,807	26,872	27,790	7,512	23,344	4,272	123,554
Maintaining nonproducing wells.....	24,375	.....	.....	9,232	.....	3,500	.....	3,034	.....	773
Drilling wells and rig building.....	531,501	.....	729	140,812	25,472	24,280	7,512	20,310	4,272	122,781
Per foot drilled by reporting companies.....	1.43	.....	.....	2.81	1.09	0.92	2.15	1.59	1.33	2.13
Doing other work.....	39,827	.....	20,462	763	1,200	.....	.....	.....	.....	.....
Average number of wage earners on active days, total.....	877	.....	17	261	49	50	16	22	3	139
Full-time workers.....	651	.....	13	212	36	32	18	17	3	81
Part-time workers.....	226	.....	4	49	13	18	.....	5	.....	58
Maintaining wells, total.....	38	.....	.....	18	.....	4	.....	2	.....	3
Full-time workers.....	28	.....	.....	18	.....	3	.....	1	.....	.....
Part-time workers.....	10	.....	.....	.....	.....	1	.....	1	.....	3
Drilling wells and rig building, total.....	795	.....	4	240	45	46	16	20	3	136
Full-time workers.....	590	.....	1	192	34	29	16	16	3	81
Part-time workers.....	205	.....	3	48	11	17	.....	4	.....	55
Doing other work, total.....	44	.....	13	3	4	.....	.....	.....	.....	.....
Full-time workers.....	33	.....	12	2	2	.....	.....	.....	.....	.....
Part-time workers.....	11	.....	1	1	2	.....	.....	.....	.....	.....
Average hourly earning of wage earners.....	\$0.89	.....	\$0.66	\$0.90	\$0.87	\$0.81	\$0.95	\$0.95	\$0.70	\$0.93
Horsepower rating of prime movers and electric motors driven by purchased energy, total.....	10,642	.....	.....	1,723	465	552	.....	272	160	3,019
Prime movers.....	10,273	.....	.....	1,681	465	552	.....	272	160	3,019
Electric motors driven by purchased energy.....	369	.....	.....	42	.....	.....	.....	.....	.....	.....
Electric energy consumed (thousands of kw.-hrs.) <sup>5</sup> .....	474	.....	.....	19	1	.....	.....	.....	.....	.....
Fuels consumed: <sup>6</sup>										
Bituminous coal (tons of 2,000 pounds).....	99	.....	.....	.....	.....	41	.....	.....	.....	.....
Fuel oil (barrels of 42 gallons).....	129,576	.....	.....	17,109	9,000	142	.....	.....	.....	75,101
Gasoline and kerosene (gallons).....	270,750	.....	1,806	109,105	4,580	28,449	.....	3,630	.....	620
Natural gas (thousands of cubic feet).....	218,676	.....	.....	23,363	38,477	8,769	5,952	1,107	1,333	23,678

<sup>1</sup> For definition of nonproducing operations included, see table 7, footnote 3. For explanation of terms used see appropriate footnotes to tables 3 and 7.

<sup>2</sup> Of this number, 5 companies had nonproducing operations in 2 States; 2, in 3 States; 2, in 4 States; and 1, in 8 States. Statistics for combined States represent 2 concerns in Alabama; 1, in Florida; 1, in Iowa; 4, in Kentucky; 22, in Missouri; 2, in Nebraska; 1, in New Mexico; 4, in New York; 1, in North Dakota and South Dakota; 1, in Pennsylvania; 1, in Tennessee; 2, in Utah; and 1, in Washington.

TABLE 19.—PRINCIPAL STATISTICS FOR NONPRODUCING OPERATIONS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>—Continued

ITEM	Michigan	Mississippi	Montana	New Mexico, Nebraska, Utah, North Dakota, South Dakota, and Washington	New York and Pennsylvania	Ohio	Oklahoma	Texas	West Virginia	Wyoming
Number of operating companies.....	42	10	8	7	5	7	9	51	15	5
Number of persons engaged, total.....	60	72	13	28	37	22	8	89	31	9
Wage earners (average for the year, including inactive periods).....	8	38	4	9	2	1	2	52	8	5
Salaried employees.....	8	28	4	19	3	14	3	20	5	4
Proprietors and firm members (not applicable to corporations).....	44	8	5	.....	2	7	3	17	20	.....
Performing manual labor.....	5	3	5	.....	1	2	2	1	8	.....
Principal expenses designated below, total.....	\$243,353	\$549,002	\$51,617	\$89,279	\$45,902	\$32,944	\$70,641	\$887,638	\$49,151	\$27,657
Wages.....	\$14,752	\$87,129	\$4,430	\$10,345	\$1,255	\$877	\$2,048	\$79,347	\$4,030	\$3,353
Salaries.....	\$19,643	\$56,639	\$5,169	\$22,478	\$3,635	\$3,255	\$8,100	\$43,878	\$774	\$8,996
Supplies and materials.....	\$4,732	\$82,281	\$2,450	\$11,677	\$2,867	\$1,175	\$700	\$58,784	\$2,103	\$54
Fuel.....	\$3,374	\$28,865	\$1,687	\$250	\$82	\$49	\$4,700	\$10,558	\$713	.....
Purchased electric energy.....	\$75	.....	\$5,248	\$972	.....	.....	.....	\$80	.....	.....
Contract work.....	\$200,777	\$335,088	\$32,635	\$43,559	\$38,083	\$27,788	\$55,095	\$895,033	\$41,531	\$17,254
Cost of buildings, machinery, and equipment erected or installed during year, total.....	\$23,336	\$35,538	\$28,054	\$300	\$9,477	\$1,391	\$2,223	\$572,345	\$8,580	\$10,494
Buildings.....	\$600	\$2,593	\$1,375	.....	.....	.....	.....	\$142,858	.....	.....
Machinery and equipment, total.....	\$22,736	\$32,945	\$26,679	\$300	\$9,477	\$1,391	\$2,223	\$429,487	\$8,580	\$10,494
Purchased in new condition.....	\$21,236	\$32,945	\$11,911	\$300	\$9,477	\$1,391	\$2,000	\$420,028	\$7,417	\$5,092
Purchased in used condition.....	\$1,500	.....	\$14,768	.....	.....	.....	\$223	\$9,459	\$1,163	\$5,402
Number of wells drilled and completed in 1939, total.....	65	15	5	2	9	10	12	86	17	5
Oil wells.....	1	.....	2	.....	2	4	2	7	.....	.....
Gas wells.....	.....	.....	2	.....	2	.....	.....	1	7	.....
Dry holes.....	64	15	1	2	5	6	10	78	10	5
Drilled on contract for reporting companies, total.....	51	7	4	.....	9	8	9	49	13	5
Oil wells.....	1	.....	2	.....	2	4	.....	6	.....	.....
Gas wells.....	.....	.....	2	.....	2	.....	.....	.....	5	.....
Dry holes.....	50	7	.....	.....	5	4	9	43	8	5
Drilled by reporting companies for their own account, total.....	14	8	1	2	.....	2	3	37	4	.....
Oil wells.....	.....	.....	.....	.....	.....	.....	2	1	.....	.....
Gas wells.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....
Dry holes.....	14	8	1	2	.....	2	1	35	2	.....
Footage of wells drilled and completed in 1939, total.....	119,544	69,393	10,870	5,893	19,650	25,439	24,724	317,992	34,812	3,357
Drilled on contract for reporting companies.....	100,189	30,000	9,040	.....	19,650	21,839	19,242	206,268	28,639	3,357
Drilled by reporting companies for their own account.....	19,355	39,393	1,830	5,893	.....	3,600	5,482	111,724	6,173	.....
Cost of drilling and equipping wells completed in 1939.....	\$247,118	\$395,733	\$58,611	\$26,249	\$33,005	\$36,979	\$75,883	\$841,322	\$74,420	\$11,439
Number of man-hours worked by wage earners, total..	14,599	66,828	6,000	14,782	2,750	1,216	3,380	85,797	8,420	8,799
Maintaining nonproducing wells.....	.....	.....	.....	.....	2,750	.....	.....	378	210	4,500
Drilling wells and rig building.....	14,599	57,869	6,000	11,902	.....	1,216	2,116	85,421	6,210	.....
Per foot drilled by reporting companies.....	0.75	1.47	3.28	2.02	.....	0.34	0.39	0.76	0.76	.....
Doing other work.....	.....	8,959	.....	2,880	.....	.....	1,264	.....	.....	4,299
Average number of wage earners on active days, total.....	25	78	14	39	3	5	6	123	23	4
Full-time workers.....	21	59	8	39	3	3	4	98	4	4
Part-time workers.....	4	19	6	.....	.....	2	2	27	19	.....
Maintaining wells, total.....	.....	.....	.....	.....	3	.....	.....	2	4	2
Full-time workers.....	.....	.....	.....	.....	3	.....	.....	1	.....	2
Part-time workers.....	.....	.....	.....	.....	.....	.....	.....	1	4	.....
Drilling wells and rig building, total.....	25	59	14	38	.....	5	4	121	19	.....
Full-time workers.....	21	46	8	38	.....	3	3	95	4	.....
Part-time workers.....	4	13	6	.....	.....	2	1	26	15	.....
Doing other work, total.....	.....	19	.....	1	.....	.....	2	.....	.....	2
Full-time workers.....	.....	13	.....	1	.....	.....	1	.....	.....	2
Part-time workers.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....
Average hourly earning of wage earners.....	\$1.01	\$1.00	\$0.74	\$0.70	\$0.46	\$0.56	\$0.61	\$0.92	\$0.63	\$0.38
Horsepower rating of prime movers and electric motors driven by purchased energy, total.....	351	300	135	619	.....	245	113	1,203	85	1,200
Prime movers.....	349	300	135	494	.....	245	113	1,203	85	1,200
Electric motors driven by purchased energy.....	2	.....	.....	325	.....	.....	.....	.....	.....	.....
Electric energy consumed (thousands of kw.-hrs.) <sup>5</sup> ..	2	.....	372	78	.....	.....	.....	2	.....	.....
Fuels consumed: <sup>6</sup>	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bituminous coal (tons of 2,000 pounds).....	58	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fuel oil (barrels of 42 gallons).....	204	21,731	225	.....	.....	.....	4,700	1,085	279	.....
Gasoline and kerosene (gallons).....	16,997	42,819	10,300	1,800	.....	179	.....	51,665	.....	.....
Natural gas (thousands of cubic feet).....	4,426	18,000	.....	1,190	124	150	4,729	82,693	4,685	.....

<sup>3</sup> Includes figure for 1 salaried employee at a central office in Rhode Island.<sup>4</sup> Statistics include 36 wage earners at central offices and laboratories; these wage earners were paid \$86,459.<sup>5</sup> Purchased energy only. No electric energy generated by reporting companies was reported.<sup>6</sup> No anthracite was reported consumed at these operations.

## MINERAL INDUSTRIES

TABLE 20.—PRINCIPAL STATISTICS FOR SMALL CONCERNS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

[For producing operations only]

ITEM	United States	Arkansas	California	Illinois	Indiana	Kansas	Kentucky	Louisiana	Michigan	Mississippi
Number of operating companies.....	2,877	14	62	30	72	193	28	40	75	7
Number of wells producing, December 31, 1939, total..	12,993	33	69	129	314	1,040	173	63	98	7
Oil wells.....	10,764	28	67	123	121	659	150	45	68	.....
Gas wells.....	2,229	5	2	6	193	181	23	18	28	7
Number of wells drilled and completed in 1939 <sup>2</sup> .....	225	.....	9	5	24	23	1	1	9	.....
Quantity of products:										
Crude petroleum (barrels).....	1,886,711	22,972	77,663	24,943	27,404	158,411	11,282	38,211	63,851	.....
Natural gas (M cubic feet), total.....	11,937,945	104,549	53,316	15,646	220,341	487,118	97,321	404,836	217,563	239,440
Casinghead.....	2,376,608	23,905	30,299	2,010	875	25,828	20,450	5,327	6,487	.....
"Dry".....	9,567,337	80,644	23,017	13,636	219,466	461,290	78,871	399,509	211,076	239,440
Marketed, total.....	11,346,734	30,368	50,235	13,636	218,523	465,482	71,787	399,281	215,658	239,440
Casinghead.....	1,911,719	2,555	27,218	.....	.....	4,542	100	1,752	4,582	.....
"Dry".....	9,435,015	27,813	23,017	13,636	218,523	460,940	71,687	397,509	211,076	239,440
All other production, total.....	591,211	74,181	3,081	2,010	1,818	21,636	25,554	5,575	1,905	.....
Casinghead.....	458,889	21,350	3,081	2,010	875	21,286	20,350	3,575	1,905	.....
"Dry".....	132,322	52,831	.....	.....	943	350	5,204	2,000	.....	.....
Value of products, total.....	\$2,736,609	\$22,490	\$57,905	\$25,787	\$50,761	\$169,242	\$21,002	\$45,052	\$84,613	\$10,569
Crude petroleum.....	\$1,890,007	\$15,739	\$54,891	\$24,587	\$26,598	\$134,301	\$11,618	\$33,335	\$55,053	.....
Marketed natural gas.....	\$810,008	\$2,428	\$3,014	\$1,200	\$24,163	\$30,107	\$9,384	\$11,117	\$28,915	\$10,569
Amount received or due for services performed <sup>4</sup> .....	\$36,594	\$4,323	.....	.....	.....	\$4,834	.....	\$600	\$645	.....
Number of wage earners (average for the year).....	2,179	16	32	23	64	152	17	37	52	3
Number of proprietors and firm members performing manual labor.....	1,242	11	24	5	9	84	8	11	25	5
Wages paid.....	\$702,676	\$4,828	\$14,338	\$10,024	\$22,638	\$50,161	\$5,041	\$7,715	\$17,781	\$1,100
Cost of drilling and equipping wells completed in 1939.....	\$200,655	.....	\$9,780	\$3,813	\$24,568	\$15,972	\$335	\$1,500	\$14,597	.....

  

ITEM	Montana	New Mexico	New York	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Wyoming	Colorado, Missouri, South Dakota, Utah, and Washington
Number of operating companies.....	46	9	46	294	524	483	588	351	15	9
Number of wells producing, December 31, 1939, total..	94	13	510	1,988	2,130	3,342	1,775	1,177	44	16
Oil wells.....	81	11	480	1,585	1,958	2,703	1,695	782	43	7
Gas wells.....	13	2	50	383	174	639	80	415	1	9
Number of wells drilled and completed in 1939 <sup>2</sup> .....	.....	5	5	14	33	15	64	16	1	.....
Quantity of products:										
Crude petroleum (barrels).....	54,195	3,886	15,226	101,059	484,982	124,221	595,907	62,237	16,734	1,747
Natural gas (M cubic feet), total.....	346,118	95,769	49,058	626,159	1,404,338	1,304,143	4,180,102	2,019,973	14,000	58,155
Casinghead.....	117	7,300	11,320	43,139	513,176	244,632	1,364,812	70,847	.....	700
"Dry".....	346,117	88,469	37,738	583,020	891,162	1,059,511	2,815,290	1,949,626	14,000	57,455
Marketed, total.....	346,117	82,469	45,386	600,276	1,341,795	1,158,897	4,017,493	1,978,976	14,000	58,955
Casinghead.....	.....	8,198	25,506	467,398	111,934	1,202,203	55,733	.....	.....	.....
"Dry".....	346,117	82,469	37,188	574,770	874,399	1,046,963	2,815,290	1,923,243	14,000	58,955
All other production, total.....	1	13,300	3,672	25,883	62,543	145,246	162,609	40,997	.....	1,200
Casinghead.....	1	7,300	3,122	17,633	45,780	132,698	162,809	14,614	.....	700
"Dry".....	.....	6,000	550	8,250	16,763	12,546	.....	26,383	.....	500
Value of products, total.....	\$58,198	\$6,336	\$40,173	\$222,081	\$529,775	\$454,971	\$594,001	\$320,658	\$17,900	\$5,127
Crude petroleum.....	\$44,521	\$3,145	\$30,857	\$123,018	\$452,111	\$238,631	\$522,704	\$101,078	\$15,900	\$1,940
Marketed natural gas.....	\$11,045	\$3,191	\$9,316	\$96,671	\$70,779	\$209,319	\$68,625	\$214,978	\$2,000	\$3,187
Amount received or due for services performed <sup>4</sup> .....	\$2,622	.....	.....	\$2,392	\$6,885	\$7,021	\$2,672	\$4,600	.....	.....
Number of wage earners (average for the year).....	35	5	34	240	425	292	432	300	16	4
Number of proprietors and firm members performing manual labor.....	9	5	26	118	236	293	242	123	4	4
Wages paid.....	\$15,416	\$3,096	\$14,046	\$64,069	\$148,078	\$88,917	\$136,193	\$57,780	\$9,790	\$1,687
Cost of drilling and equipping wells completed in 1939.....	.....	\$3,451	\$6,280	\$18,677	\$26,982	\$16,252	\$37,247	\$21,028	\$275	.....

<sup>1</sup> Statistics represent concerns producing crude petroleum or natural gas whose reports covering the production of crude petroleum, natural gas, and natural gasoline, and the rendering of oil- and gas-field services on contract (when combined for all States) indicated that neither total value of products and services rendered, nor reported principal expenses, nor cost of buildings, machinery, and equipment during the year, nor cost of drilling and equipping oil wells, gas wells, and dry holes amounted to as much as \$2,500. For explanation of terms used see appropriate footnotes to tables 3 and 7.

<sup>2</sup> Of this number, 7 companies operated wells in 2 States.

<sup>3</sup> Detailed statistics for the number, footage, and costs of drilling these wells are shown in table 21.

<sup>4</sup> Represents \$35,932, received for services, and \$682, the value of 16,550 gallons of "drip" gasoline produced in Arkansas. The amount received for services represents \$7,552 for drilling, \$1,707 for cleaning out and bailing wells, \$13,902 for operating wells, and \$12,771 for other and unspecified kinds of work.

## CRUDE PETROLEUM AND NATURAL GAS

169

TABLE 21.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS BY SMALL CONCERNS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	UNITED STATES			CALIFORNIA, LOUISIANA, NEW MEXICO, AND WYOMING <sup>2</sup>			ILLINOIS AND INDIANA <sup>3</sup>			KANSAS		
	Total	Drilled on contract	All other	Total	Drilled on contract	All other	Total	Drilled on contract	All other	Total	Drilled on contract	All other
Number of wells drilled, total.....	225	119	106	16	7	9	29	19	10	23	9	14
Oil wells.....	91	51	40	6	2	4	8	5	1	7	3	4
Gas wells.....	42	19	23	.....	.....	.....	5	2	3	10	3	7
Dry holes.....	92	49	43	10	5	5	18	12	6	6	3	3
Footage drilled, total.....	177,537	92,809	84,728	10,532	5,044	5,489	20,642	12,758	7,884	16,695	5,872	10,823
Oil wells.....	65,284	34,962	30,322	4,363	2,037	2,326	3,912	3,184	728	5,600	2,430	3,170
Gas wells.....	40,808	19,319	21,287	.....	.....	.....	4,650	1,860	2,790	6,920	2,192	4,728
Dry holes.....	71,647	38,528	33,119	6,169	3,007	3,162	12,080	7,714	4,566	4,175	1,250	2,925
Average footage drilled per well, all wells..	789	780	799	658	721	610	712	671	788	726	652	773
Oil wells.....	717	686	758	727	1,018	592	652	637	728	800	810	792
Gas wells.....	967	1,017	926	.....	.....	.....	930	930	930	692	731	675
Dry holes.....	779	786	770	617	601	632	671	643	728	696	417	975
Cost of drilling and equipping wells, total..	\$200,655	\$113,618	\$87,037	\$15,006	\$8,300	\$6,706	\$28,379	\$19,517	\$8,862	\$15,872	\$5,630	\$10,242
Per well.....	\$892	\$955	\$821	\$938	\$1,186	\$745	\$979	\$1,027	\$886	\$690	\$626	\$732
Per foot.....	\$1.13	\$1.22	\$1.03	\$1.42	\$1.65	\$1.22	\$1.37	\$1.53	\$1.12	\$0.95	\$0.96	\$0.95
Oil wells.....	\$78,555	\$41,775	\$36,782	\$5,380	\$2,100	\$3,280	\$6,912	\$4,738	\$2,174	\$5,976	\$2,324	\$3,652
Per well.....	\$863	\$619	\$920	\$897	\$1,050	\$820	\$1,152	\$948	\$2,174	\$854	\$775	\$913
Per foot.....	\$1.20	\$1.19	\$1.21	\$1.23	\$1.03	\$1.41	\$1.77	\$1.49	\$2.99	\$1.07	\$0.98	\$1.15
Gas wells.....	\$41,431	\$21,987	\$19,444	.....	.....	.....	\$4,770	\$2,820	\$1,950	\$5,990	\$1,800	\$4,190
Per well.....	\$968	\$1,157	\$845	.....	.....	.....	\$954	\$1,410	\$650	\$599	\$600	\$599
Per foot.....	\$1.02	\$1.14	\$0.91	.....	.....	.....	\$1.03	\$1.52	\$0.70	\$0.87	\$0.82	\$0.89
Dry holes.....	\$80,669	\$49,958	\$30,811	\$9,626	\$6,200	\$3,426	\$16,697	\$11,959	\$4,738	\$3,906	\$1,508	\$2,400
Per well.....	\$877	\$1,018	\$717	\$983	\$1,240	\$685	\$928	\$997	\$790	\$651	\$502	\$800
Per foot.....	\$1.13	\$1.29	\$0.93	\$1.56	\$2.06	\$1.08	\$1.38	\$1.55	\$1.09	\$0.94	\$1.20	\$0.82
Cost excluding amount paid contractors, total.....	\$104,527	\$19,013	\$85,514	\$7,170	\$525	\$5,645	\$10,687	\$2,125	\$8,562	\$11,208	\$966	\$10,242
Oil wells.....	\$46,970	\$11,276	\$35,694	\$3,280	.....	\$3,280	\$2,624	\$750	\$1,874	\$4,188	\$516	\$3,652
Gas wells.....	\$24,818	\$5,418	\$19,400	.....	.....	.....	\$2,435	\$485	\$1,950	\$4,040	\$450	\$4,190
Dry holes.....	\$32,739	\$2,319	\$30,420	\$3,890	\$525	\$3,365	\$5,628	\$690	\$4,738	\$2,400	.....	\$2,400
Cost of drilling, total.....	\$64,610	.....	\$64,610	\$5,565	.....	\$5,565	\$7,528	.....	\$7,528	\$7,380	.....	\$7,380
Oil wells.....	\$20,709	.....	\$20,709	\$2,440	.....	\$2,440	\$1,370	.....	\$1,370	\$1,535	.....	\$1,535
Gas wells.....	\$14,108	.....	\$14,108	.....	.....	.....	\$1,500	.....	\$1,500	\$3,425	.....	\$3,425
Dry holes.....	\$29,793	.....	\$29,793	\$3,125	.....	\$3,125	\$4,658	.....	\$4,658	\$2,400	.....	\$2,400
Cost of equipping wells, total.....	\$39,917	\$19,013	\$20,904	\$1,605	\$525	\$1,080	\$3,159	\$2,125	\$1,034	\$3,848	\$966	\$2,882
Oil wells.....	\$26,261	\$11,276	\$14,985	\$840	.....	\$840	\$1,254	\$750	\$504	\$2,633	\$516	\$2,117
Gas wells.....	\$10,710	\$5,418	\$5,292	.....	.....	.....	\$935	\$485	\$450	\$1,215	\$450	\$765
Dry holes.....	\$2,946	\$2,319	\$627	\$765	\$525	\$240	\$970	\$890	\$80	.....	.....	.....
Amount paid or due contractors for drilling and equipping wells, total....	\$96,128	\$94,605	\$1,523	\$7,836	\$7,775	\$61	\$17,692	\$17,392	\$300	\$4,664	\$4,664	.....
Oil wells.....	\$31,565	\$30,497	\$1,068	\$2,100	\$2,100	.....	\$4,288	\$3,988	\$300	\$1,808	\$1,808	.....
Gas wells.....	\$16,613	\$16,569	\$44	.....	.....	.....	\$2,335	\$2,335	.....	\$1,350	\$1,350	.....
Dry holes.....	\$47,930	\$47,539	\$391	\$5,736	\$5,675	\$61	\$11,069	\$11,069	.....	\$1,506	\$1,506	.....

See footnotes at end of table.

## MINERAL INDUSTRIES

TABLE 21.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS BY SMALL CONCERNS IN THE CRUDE-PETROLEUM AND NATURAL-GAS INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>—Continued

ITEM	KENTUCKY, MICHIGAN, OHIO, AND WEST VIRGINIA <sup>4</sup>			NEW YORK AND PENNSYLVANIA <sup>5</sup>			OKLAHOMA			TEXAS		
	Total	Drilled on contract	All other	Total	Drilled on contract	All other	Total	Drilled on contract	All other	Total	Drilled on contract	All other
Number of wells drilled, total.....	40	21	19	20	16	4	33	9	24	64	38	26
Oil wells.....	11	4	7	10	8	2	13	2	11	38	27	11
Gas wells.....	10	4	6	6	5	1	11	5	6	.....	.....	.....
Dry holes.....	19	13	6	4	3	1	9	2	7	28	11	15
Footage drilled, total.....	45,708	24,955	20,751	23,170	18,610	4,560	26,808	7,788	19,022	33,984	17,784	16,200
Oil wells.....	11,046	4,446	6,600	11,343	8,943	2,400	10,737	1,600	9,137	18,283	12,322	5,961
Gas wells.....	11,493	3,944	7,549	8,367	7,033	1,334	9,178	4,280	4,898	.....	.....	.....
Dry holes.....	23,167	16,565	6,602	3,460	2,634	868	6,895	1,898	4,999	15,701	5,462	10,239
Average footage drilled per well, all wells..	1,144	1,188	1,092	1,158	1,163	1,140	812	865	793	531	466	623
Oil wells.....	1,004	1,112	943	1,134	1,118	1,200	828	800	831	481	456	542
Gas wells.....	1,149	986	1,258	1,394	1,407	1,334	834	858	814	.....	.....	.....
Dry holes.....	1,219	1,274	1,100	866	878	828	766	948	714	604	497	883
Cost of drilling and equipping wells, total..	\$54,637	\$30,071	\$24,566	\$22,532	\$17,323	\$5,209	\$26,982	\$8,796	\$18,186	\$37,247	\$23,981	\$13,266
Per well.....	\$1,366	\$1,432	\$1,293	\$1,127	\$1,083	\$1,302	\$818	\$977	\$758	\$582	\$631	\$510
Per foot.....	\$1.20	\$1.21	\$1.18	\$0.97	\$0.95	\$1.14	\$1.01	\$1.13	\$0.96	\$1.10	\$1.35	\$0.82
Oil wells.....	\$13,296	\$4,821	\$8,475	\$9,178	\$7,469	\$1,709	\$12,846	\$2,976	\$9,870	\$24,987	\$17,345	\$7,642
Per well.....	\$1,209	\$4,205	\$1,211	\$918	\$934	\$854	\$988	\$1,488	\$897	\$857	\$642	\$693
Per foot.....	\$1.20	\$1.08	\$1.23	\$0.81	\$0.84	\$0.71	\$1.20	\$1.88	\$1.08	\$1.37	\$1.41	\$1.28
Gas wells.....	\$15,598	\$5,842	\$9,744	\$8,618	\$7,418	\$1,200	\$8,467	\$4,107	\$2,380	.....	.....	.....
Per well.....	\$1,559	\$1,480	\$1,824	\$1,436	\$1,484	\$1,200	\$588	\$821	\$392	.....	.....	.....
Per foot.....	\$1.38	\$1.48	\$1.29	\$1.03	\$1.05	\$0.90	\$0.70	\$0.96	\$0.48	.....	.....	.....
Dry holes.....	\$25,755	\$19,408	\$6,347	\$4,736	\$2,436	\$2,300	\$7,669	\$1,713	\$5,956	\$12,280	\$6,636	\$5,644
Per well.....	\$1,358	\$1,493	\$1,058	\$1,184	\$812	\$2,300	\$852	\$856	\$851	\$472	\$603	\$378
Per foot.....	\$1.11	\$1.17	\$0.96	\$1.37	\$0.92	\$2.78	\$1.11	\$0.90	\$1.19	\$0.78	\$1.21	\$0.55
Cost excluding amount paid contractors, total.....	\$27,330	\$2,808	\$24,522	\$8,823	\$3,614	\$5,209	\$20,034	\$2,740	\$17,294	\$19,275	\$8,235	\$13,040
Oil wells.....	\$9,334	\$859	\$8,475	\$3,402	\$1,893	\$1,709	\$10,531	\$1,223	\$9,308	\$13,631	\$6,235	\$7,396
Gas wells.....	\$10,945	\$1,245	\$9,700	\$3,121	\$1,921	\$1,200	\$3,677	\$1,317	\$2,360	.....	.....	.....
Dry holes.....	\$7,051	\$704	\$6,347	\$2,300	.....	\$2,300	\$5,828	\$200	\$5,628	\$5,644	.....	\$5,644
Cost of drilling, total.....	\$17,907	.....	\$17,907	\$4,240	.....	\$4,240	\$12,283	.....	\$12,283	\$9,727	.....	\$9,727
Oil wells.....	\$4,582	.....	\$4,582	\$1,040	.....	\$1,040	\$5,659	.....	\$5,659	\$4,083	.....	\$4,083
Gas wells.....	\$8,978	.....	\$8,978	\$900	.....	\$900	\$1,305	.....	\$1,305	.....	.....	.....
Dry holes.....	\$8,347	.....	\$8,347	\$2,300	.....	\$2,300	\$5,619	.....	\$5,619	\$5,644	.....	\$5,644
Cost of equipping wells, total.....	\$9,423	\$2,808	\$6,615	\$4,583	\$3,614	\$989	\$7,751	\$2,740	\$5,011	\$9,548	\$6,235	\$3,313
Oil wells.....	\$4,752	\$859	\$3,893	\$2,382	\$1,693	\$869	\$4,872	\$1,223	\$3,649	\$9,548	\$6,235	\$3,313
Gas wells.....	\$3,987	\$1,245	\$2,742	\$2,221	\$1,921	\$300	\$2,372	\$1,317	\$1,055	.....	.....	.....
Dry holes.....	\$704	\$704	.....	.....	.....	.....	\$507	\$200	\$307	.....	.....	.....
Amount paid or due contractors for drilling and equipping wells, total.....	\$27,307	\$27,283	\$44	\$13,709	\$13,709	.....	\$6,948	\$6,056	\$892	\$17,972	\$17,746	\$226
Oil wells.....	\$3,962	\$3,962	.....	\$5,776	\$5,776	.....	\$2,315	\$1,753	\$562	\$11,336	\$11,110	\$226
Gas wells.....	\$4,641	\$4,597	\$44	\$5,497	\$5,497	.....	\$2,790	\$2,790	.....	.....	.....	.....
Dry holes.....	\$18,704	\$18,704	.....	\$2,436	\$2,436	.....	\$1,843	\$1,513	\$330	\$6,636	\$6,636	.....

<sup>1</sup> Statistics cover wells drilled by concerns included in table 20. For explanation of terms used see appropriate footnotes to tables 2 and 9. Figures for columns headed "Drilled on contract" represent wells drilled on contract for reporting companies; those for columns headed "All other" represent wells drilled by reporting companies for their own account.

<sup>2</sup> California, 3 oil wells and 6 dry holes; Louisiana, 1 oil well; New Mexico, 2 oil wells and 3 dry holes; Wyoming, 1 dry hole.

<sup>3</sup> Illinois, 2 oil wells and 3 dry holes; Indiana, 4 oil wells, 5 gas wells, and 15 dry holes.

<sup>4</sup> Kentucky, 1 dry hole; Michigan, 9 dry holes; Ohio, 5 oil wells, 4 gas wells, and 5 dry holes; West Virginia, 6 oil wells, 6 gas wells, and 4 dry holes.

<sup>5</sup> New York, 3 oil wells, 1 gas well, and 1 dry hole; Pennsylvania, 7 oil wells, 5 gas wells, and 3 dry holes.

## Oil- and Gas- Field Services Performed by Contractors

This report presents results of the first extensive survey ever undertaken by a Federal agency of oil- and gas-field services performed by contractors in the United States. These contractors comprise an important segment of the oil and gas industry. Few problems of the oil and gas industry—particularly those concerning exploration, development, and production—can be adequately considered without taking account of the broad services performed by oil- and gas-field contractors as shown in the tables of this report.

Oil- and gas-field contractors reported a total of \$203,844,000 received or due for services performed in 1939, employed 40,061 wage earners and 5,153 salaried employees, and did about 60 percent of the oil- and gas-field drilling.<sup>1</sup> The number of persons employed by oil- and gas-field contractors is larger than the number employed in all the stone-quarrying industries and is almost as large as the number employed in the iron- and copper-mining industries together. Despite the importance of the activities of oil- and gas-field contractors, however, little statistical information regarding them has been available heretofore.<sup>2</sup> The data obtained from oil- and gas-field contractors and crude-petroleum and natural-gas producers in the 1939 Census of Mineral Industries provide for the first time a comprehensive picture of crude-petroleum and natural-gas drilling and producing activities.

### TYPES OF WORK PERFORMED

Contract services in the development of oil and gas fields in 1939 were performed by 1,888 concerns in at least 31 States.<sup>3</sup> A large variety of services were performed, including exploration work, moving supplies and equipment, preparing well locations, erecting derricks, excavating slush pits, setting up drilling rigs, drilling wells (with all the necessary auxiliary tasks such as well-logging and testing, running casing, cementing, cleaning out wells, shooting wells, and repairing tools), installing production and storage equipment, and operating wells. Judged by the proportion of the footage of all oil, gas, and dry wells that was drilled by contractors in 1939, about 80 percent of the oil- and gas-field development work was performed by contractors rather than by companies operating wells.

The technical skills, knowledge, and equipment required to perform the many tasks necessary to the development of oil and gas fields have led to much specialization. Of the \$203,844,000 received or due the 1,888 contractors for services performed in

<sup>1</sup>These statistics do not include contract work performed by concerns producing oil or gas for their own account from whom separate reports covering the contract work were not obtained; such concerns received \$7,268,000 for oil- and gas-field contract work (see table 7). Statistics are also excluded for contractors whose oil- or gas-field services performed in 1939 were valued at less than \$2,500; such contractors reported \$154,000 received or due for work performed (see tables 49 and 50). Thus the total received or due for oil- and gas-field work performed on contract in 1939 as reported to the Bureau of the Census amounted to \$211,266,000 (see also footnote 1, table 22).

<sup>2</sup>Every effort was made to cover all contractors who performed oil- and gas-field services. A preliminary survey of the larger oil and gas companies was made to obtain the names of oil- and gas-field contractors that were active in 1939. Published and unpublished records and files of the various Federal, State, and private agencies were carefully examined, numerous directories, trade journals, and records of drilling permits were consulted, and special field agents were employed to find new or unlisted contractors. One of the inquiries in the schedules used to canvass oil and gas producers requested the names and addresses of oil- and gas-field contractors; these schedules were also carefully checked for additional names. Although complete coverage was sought, it is probable that some concerns, especially some of the smaller drilling contractors, did not file reports.

<sup>3</sup>All census reports since 1880, except those for 1889 and 1929, have presented statistics only on total amounts paid to contractors by oil- and gas-producing companies. In addition, the census of 1902 reported that the contractors employed 11,217 workers; data on the number of contractors' employees, however, were obtained from oil and gas companies rather than from the contractors themselves, and were largely estimated.

<sup>4</sup>Excludes the 711 companies that did contract work and also work for their own account but from whom separate reports covering the contract work were not obtained, and 158 contractors from whom reports were received but whose oil- and gas-field services in 1939 were valued at less than \$2,500. Unless otherwise stated, the statistics presented in subsequent paragraphs of this report refer to these 1,888 concerns.

1939, 8.7 percent was accounted for by 76 contractors who specialized in exploration and well-surveying work; 5.1 percent, by 172 who were engaged chiefly in hauling oil- and gas-field supplies and equipment; 4.5 percent, by 115 engaged principally in building, repairing, and dismantling rigs and derricks; 62.8 percent, by 985 engaged in drilling oil, gas, and dry wells; 4.6 percent, by 23 engaged chiefly in cementing wells; 1.7 percent, by 34 engaged principally in shooting wells; 1.4 percent, by 10 engaged mainly in perforating well casing; 1.6 percent, by 10 engaged principally in acidizing and other chemical treatment of wells; 2.9 percent, by 97 engaged chiefly in oil- and gas-field machine-shop and repair work; and the remaining 6.7 percent, by 366 contracting concerns engaged principally in other related activities, including several concerns whose principal activities were not determined.

About 87 percent of the total amount received or due was for contract work performed in the following six States ranked according to the value of the work: Texas, Illinois, California, Louisiana, Oklahoma, and Kansas.

The following sections briefly discuss the various services performed by contractors shown in table 22. The concluding sections present, for the contractors as a whole, the principal statistics on employment and working time, wages and salaries, and power equipment.

### EXPLORATION AND WELL-SURVEYING WORK

Seventy-six of the contractors were engaged principally in exploration and well-surveying work. The total received or due for services performed by them in 1939 was \$17,670,000. Of this total, \$12,642,000 was reported by 56 concerns engaged chiefly in geophysical exploration work and core and shot-hole drilling, and \$5,028,000 by 20 concerns engaged principally in well surveying, mainly electrical logging. The 76 contractors employed an average of 2,804 wage earners and (in October of the year) 1,667 salaried employees. Wages paid totaled \$3,688,000 and salaries, \$4,605,000.

The search for oil and gas is a highly developed art involving skillful application of scientific techniques and requiring the use of sensitive and expensive equipment. The careful assembly and analysis of information regarding subsurface conditions adds to the known oil and gas resources of the country and reduces the economic waste resulting from drilling an excessive number of unproductive wells.

Most of the exploration work reported was for the purpose of finding and obtaining information regarding subsurface earth formations such as anticlines, domes, faults, and other formations of importance in oil and gas production. The data were sought chiefly by geophysical methods and by core drilling (whereby a cylindrical core of the penetrated formation is recovered for analysis). Geophysical methods take advantage of the fact that different kinds of rocks have different properties of electrical resistivity, magnetic attraction, gravitational attraction, and of seismic-wave reflection. Careful measurements are made of these characteristics from different points on the surface and the results are recorded, correlated, and analyzed. Although the seismic method of geophysical prospecting was frequently reported, the census reports do not permit an accurate analysis of the extent to which various methods of exploration for oil and gas were employed in 1939. Some contractors used more than one method and many described the nature of the work performed by such general terms as "geophysical exploration" or "oil exploration."

<sup>4</sup>The geographic distribution of oil- and gas-field contract work is approximate. Each contractor was required to submit but one report and to indicate the State in which most of the work was done. Many of the large contractors did work in more than one State; the report of each such contractor was classified in the State in which most of the work was performed.



Not all of the 76 contractors for whom statistics are summarized under the heading "Exploration and well-surveying work" were engaged in finding the most likely places to drill oil or gas wells. As previously noted, 20 of the concerns were engaged principally in well surveying or logging after the drilling had begun. These well surveys are for the purpose of guiding the drilling operations; they determine the exact location of oil sands, water-bearing strata, and other important information. The data thus obtained are also used for guidance in drilling other wells in the same field or locality. Electrical logging or "electrical coring" of uncased holes has reduced the necessity for mechanical coring.

#### HAULING AND EXCAVATING

Hauling oil- and gas-field supplies and equipment was the principal work in 1939 of 172 contractors, for which they received or charged \$10,472,000. These contractors employed an average of 3,750 wage earners and 343 salaried employees who were paid \$3,173,000 in wages and \$591,000 in salaries.

Contractors engaged chiefly in excavating slush pits and cellars, grading and leveling well locations, and building foundations at well locations received or were due \$1,852,000. They employed an average of 806 wage earners and 32 salaried employees, paying out \$626,000 in wages and \$51,000 in salaries.

Many hauling and excavating contractors did a considerable amount of road building, especially for exploration and drilling concerns. Some contractors classified under other types of activities also did some hauling, excavating, and road building; for example, many of the contractors engaged principally in exploration work, drilling, cementing, shooting, or acidizing wells have their own specially equipped trucks for hauling.

#### RIG AND DERRICK BUILDING

The 115 contractors engaged principally in building, repairing, and dismantling rigs and derricks in 1939 received or were due \$9,155,000. They employed an average of 3,478 wage earners (about three-fourths of whom were part-time workers) and 258 salaried employees. Their total wage and salary payments during the year amounted to \$3,725,000 and \$568,000, respectively. Principal other work performed included constructing foundations at wells and installing production equipment. Rig and derrick building, repairing, and dismantling was also performed by contractors who specialized in other work, such as drilling contractors and contractors engaged chiefly in general oil- and gas-field machine-shop and repair work.

#### DRILLING WELLS

Drilling was by far the most important of the oil- and gas-field services performed by contractors from the standpoint of number of persons engaged and the dollar value of the work. Indeed, almost all the other contract services performed were auxiliary functions that located drill sites, prepared well locations, assembled and set up drilling supplies and equipment, guided drilling operations, or completed the wells for production. Of the total of 1,888 contractors, 985 were engaged in drilling oil and gas wells and dry holes. They accounted for \$128,107,000, or 63 percent, of the total amount received or due for contract services performed in 1939 and for over 25,000, or 53 percent, of the total number of persons engaged. Drilling contractors employed an average of 22,548 wage earners (of whom about a third were part-time workers) and 1,676 salaried employees. In addition, they reported 862 proprietors and firm members of unincorporated concerns, including 292 who performed manual labor.

A few of the drilling contractors specialized in "spudding in" (drilling only the first few feet of hole with special equipment) or in "drilling in" (drilling through the cap rock into the oil reservoir). Other work performed by drilling contractors included deepening wells previously drilled and virtually all the types of work performed by other contractors, especially cleaning out and bailing wells, running and pulling casing, shooting, acidizing, drilling water wells, and operating oil and gas wells.

The 985 contractors drilled and completed 12,322 wells in 1939, including 10,024 oil wells, 744 gas wells, and 1,554 dry holes.<sup>5</sup> These figures include wells completed in 1939 although begun in 1938 and 19 wells that were drilled and abandoned in 1939 before completion. About 60 percent of the footage of all oil, gas, and dry wells drilled in 1939 was drilled on contract.

The footage of wells drilled on contract by these contractors amounted to 38,898,000, and the total drilling cost to contractors was \$93,310,000. This cost includes expenditures for labor, supplies, fuel, and power; charges for the use of machinery and tools (depreciation charged for own equipment or rentals paid for rented equipment); and payments to subcontractors. Contractors were requested to exclude from drilling costs the cost of well equipment and other costs not covered by amounts received or due for drilling and equipping wells. The average footage drilled per well was 3,176 for oil wells, 2,870 for gas wells, and 3,168 for dry holes; for all wells and dry holes the average footage was 3,157.

The average cost of drilling per foot for all wells drilled on contract was \$2.40, ranging from \$0.88 in Pennsylvania and \$0.91 in New York where the average footages drilled per well were 1,804 and 1,859, respectively, to \$2.83 in Louisiana, \$2.86 in Arkansas, and \$4.77 in California where average footages were 5,414, 5,409, and 5,232, respectively. Of the 12,322 wells drilled on contract, the largest number, 4,236, were drilled by contractors who reported that most of their work was done in Texas and 2,265, the next largest number, by contractors who reported doing most of their work in Illinois. The average per-foot drilling cost reported by Texas contractors was \$2.35; that reported by Illinois contractors was \$2.49. The average depths of wells drilled by contractors classified in these States were 3,744 and 2,568 feet, respectively. For all States, the average per-foot drilling cost borne by contractors was \$2.41 for oil wells, \$1.99 for gas wells, and \$2.50 for dry holes.

The total cost to contractors of equipping wells, including installation expenses, was \$3,032,000. Of this total, \$1,919,000 was expended for casing (after deducting the value of casing salvaged but including the cost of salvaging); \$996,000 for flowing and pumping equipment such as tubing and sucker rods, wellhead fittings, pumps, engines, oil and gas separators, flow lines, and flow tanks; and \$117,000 for production derricks (drilling derricks wholly or partly retained over wells after completion and special production derricks erected after drilling derricks had been dismantled). It should be noted, however, that the largest proportion of the cost of equipping wells was borne by the operating companies.

#### CEMENTING WELLS

Cementing wells was reported as the principal oil- and gas-field service of 23 contracting concerns who received or were due \$9,366,000 for work performed, employed an average of 838 wage earners and 202 salaried employees, and paid \$1,760,000 in wages and \$595,000 in salaries. Principal other work performed by these contractors was well surveying, testing, and acidizing.

Cementing wells was performed by some of the largest of the oil- and gas-field contractors. The work consists of filling with cement the small annular space between the wall of the hole and the casing to exclude unwanted fluids from the well or producing strata, to facilitate control of wild wells, to reinforce and protect casing, and for other reasons. Either the bottom part or the whole string of casing may be cemented. A quick-setting type of cement is poured into the casing from the top and forced up and around the outside of the casing by pressure.

<sup>5</sup>These figures do not include 320 oil wells, 14 gas wells, and 73 dry holes drilled by companies that did contract work and also work for their own account but from whom separate reports covering the contract work were not obtained; neither do the figures include 20 oil wells, 13 gas wells, and 15 dry holes drilled by contractors from whom reports were received but whose oil- and gas-field services in 1939 were valued at less than \$2,500. For a summary of the number, footage, and costs of drilling and equipping all wells drilled on contract as reported to the Census see table 2.

## SHOOTING WELLS

Another specialized type of contract work reported by 34 contractors, who received or were due \$3,564,000, was shooting wells. The purpose of shooting is to raise the productive capacity of a well by increasing the permeability or reducing the tightness of reservoir rock near the bottom of the well, particularly if the rock consists of hard, compact sandstone or limestone and if the tightness is due to siliceous cement or to fineness of grain. Nitroglycerine in tin-coated shells is lowered into the bottom of the hole and exploded after the casing has been partly lifted or otherwise protected from injury. Contractors engaged in shooting wells reported an average of 257 wage earners and 81 salaried employees who were paid \$486,000 and \$324,000, respectively.

RUNNING, CUTTING, AND PULLING CASING,  
TUBES, AND RODS

Ninety-two contractors reported that their principal work was running, cutting, and pulling casing, tubes, and rods; 6 contractors reported plugging wells (stopping the flow of water, gas, or oil in wells) as their chief activity. Other work performed by these contractors included swabbing, cleaning, and plugging wells. The 98 contractors reported \$1,753,000 received or due for their work. They employed an average of 865 wage earners and 56 salaried employees who were paid \$757,000 in wages and \$100,000 in salaries.

The type of work performed by these contractors is closely related to drilling operations, and much of it is performed by drilling contractors. Casing or heavy steel pipe excludes water or gas from a well and prevents caving. Several strings of casing are "run in" the drilled hole and set, each successive string being smaller in diameter than the preceding one. After the well has been completed, some of the casing may be pulled or recovered; as much casing as possible is also salvaged from dry holes or abandoned wells. Many of the contractors who were not engaged in drilling wells but were cutting and pulling casing did this work at abandoned wells. The cutting and pulling of tubing (steel pipe, smaller in diameter than casing, through which oil is lifted from wells) and of sucker rods (part of the equipment of pumping wells) are also part of the task of salvaging valuable equipment from abandoned wells. Running and pulling tubes and rods, however, may also be part of the operation of cleaning the well or of repairing equipment within the well.

## PERFORATING CASING

It is sometimes advisable to case a well to a point below known oil sands. In such instances the sections of casing penetrating the productive strata are perforated to let in the desired fluids. Holes made through the casing are either punched mechanically by a special device lowered into the hole or are shot through the casing walls with steel bullets from a device known as a "gun perforator." Perforating well casing was the principal activity of 10 contractors who reported \$2,777,000 received or due. They employed an average of 294 wage earners and 204 salaried employees and paid \$691,000 in wages and \$471,000 in salaries.

## CHEMICAL TREATMENT OF WELLS

Ten contractors, who received or were due \$3,285,000, reported that their principal activity in 1939 was acidizing or other chemical treatment of wells. Calcareous reservoir beds around wells are often made more porous and permeable by disintegrating some of the rock with acid. Obstructive accumulations of paraffin are sometimes removed by using solvents. Successful chemical treatment of wells requires skill. The rock to be treated must be thoroughly studied; the strength, character, amount, and method of applying the chemical mixtures must be carefully adapted; and proper precautions must be taken to protect the casing and adjacent formations. The number of salaried employees engaged in chemical treatment, 167, was almost as large as the average number of wage earners,

202, and the total amount paid in salaries, \$464,000, exceeded the \$247,000 paid in wages.

## CLEANING OUT, BAILING, AND SWABBING WELLS

Wells frequently become clogged with sand, mud, paraffin, or other residue and require cleaning. It is usually necessary to pull out the tubes and rods and use a special clean-out string of tools, although in some cases the mud may be washed out with water and the paraffin may be removed by melting, dissolving, cutting, or scraping without removing the tubing.

Sand or other residues that are not too tightly packed are often removed by using a bailer—a device also used with cable-tool drilling rigs to remove water and cuttings. A common type of bailer is a long cylinder with a valve on the bottom attached to a projecting prong or dart. When the bailer is lowered into a well and lands on the bottom of the hole, the prong pushes the valve open and lets in the water and sand. As the bailer is hoisted the pressure on the prong is relaxed and the valve closes.

Swabbing is a temporary means of producing oil from a well with the use of a valve-equipped cylinder that fits snugly into the casing. Open valves in the swab permit oil to flow up through it while it is being lowered. These valves close when the swab is raised; raising the swab lifts virtually all the oil that is in the casing above it.

The 37 contractors who reported cleaning out, bailing, and swabbing wells as their principal activity in 1939 received or were due \$1,586,000. They employed an average of 533 wage earners and 55 salaried employees and paid them \$643,000 in wages and \$93,000 in salaries.

## OTHER WORK PERFORMED BY CONTRACTORS

The remaining 255 contractors received or were due \$14,256,000, employed an average of 3,886 wage earners and 412 salaried employees, and paid out \$4,604,000 in wages and \$1,092,000 in salaries. The principal activity of 97 of these contractors was machine-shop and repair work such as welding casing, rigs, and other equipment; recutting and reconditioning tools; repairing engines and boilers; insulating boilers and steam lines; and threading pipe. Of the others, 33 were engaged chiefly in erecting, cleaning, repairing, and dismantling lease tanks; 12, in installing production equipment such as wellhead fittings, pumps, and engines; 22, in locating and drilling water wells, including both water-supply wells and water-intake holes for oil-well flooding; 8, in operating and maintaining oil or gas wells; and 83, in general well servicing (including contractors who performed other types of work and those who did not specify the major type of work performed).

## EMPLOYMENT AND WORKING TIME

Almost 47,000 persons were engaged in performing oil- and gas-field services on contract in 1939. Contractors employed an average of 40,061 wage earners (computed in the usual census manner which takes into account inactive periods).<sup>a</sup> In addition, the contractors reported (for October) 5,153 salaried employees and 1,725 proprietors and firm members of unincorporated concerns; of the latter, 637 performed manual labor.

Salaried persons represented 11 percent of the total number of contractors' employees, the proportion varying widely with the type of work performed. In exploration and well-surveying work 39 percent of the employees were salaried persons; in shooting wells salaried employees constituted 23 percent of the total; in perforating wells, 41 percent; and in acidizing

(Continued on page 176)

<sup>a</sup>Two measures of the number of workmen employed by oil- and gas-field contractors in 1939 are presented in this report (see table 22). One measure, "Wage earners (average for the year, including inactive periods)," was computed by adding the numbers of wage earners reported for each month and dividing the sum by 12, regardless of the number of months the contractors were active. This average is comparable with the averages usually presented by the Bureau of the Census for "all mineral industries, as well as for manufacturing industries." The other measure, "Average number of wage earners on active days," represents the sum of the reported average numbers of wage earners on days the contractors performed work. This average is usually higher than the average for the year including inactive periods because it is not affected by figures for months in which no wage earners (except possibly maintenance men) were employed by the contractors.

TABLE 22.—PRINCIPAL STATISTICS FOR OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS IN THE UNITED STATES, BY MAJOR TYPE OF WORK: 1939<sup>1</sup>

ITEM	Total	Exploration and well-surveying work <sup>2</sup>	Hauling oil- and gas-field supplies and equipment <sup>3</sup>	Excavating slush pits and cellars, grading, and building foundations at well locations <sup>4</sup>	Building, repairing, and dismantling rigs and derricks <sup>5</sup>	Drilling oil, gas, and dry wells <sup>6</sup>	Running, cutting, and pulling casing, tubes, and rods <sup>7</sup>	Cementing wells <sup>8</sup>	Shooting wells <sup>9</sup>
Number of contracting concerns.....	1,888	76	172	73	115	985	98	23	34
Number of persons engaged, total.....	46,939	4,317	4,290	925	3,847	25,086	1,025	1,051	351
Wage earners (average for the year, including inactive periods) <sup>17</sup> .....	40,081	2,604	3,750	806	3,478	22,548	865	838	257
Salaried employees <sup>18</sup> .....	5,153	1,667	343	32	258	1,678	58	202	81
Proprietors and firm members (not applicable to corporations).....	1,725	46	197	87	111	862	104	11	13
Performing manual labor.....	637	18	73	32	44	292	41	9	11
Amount received or due for services performed <sup>19</sup> .....	\$203,843,917	\$17,670,423	\$10,471,871	\$1,851,816	\$9,155,432	\$128,107,076	\$1,753,089	\$9,366,442	\$3,563,538
Production for the account of other concerns:									
Crude petroleum (barrels of 42 gallons).....	1,384,685	.....	.....	.....	.....	1,372,239	.....	.....	.....
Natural gas (thousands of cu. ft.).....	12,654,045	35	.....	.....	.....	12,653,830	.....	.....	.....
Wages and salaries paid.....	\$71,289,073	\$8,292,733	\$3,784,448	\$876,357	\$4,292,663	\$41,937,540	\$856,336	\$2,354,331	\$810,441
Wages <sup>17</sup> .....	\$56,419,177	\$3,688,106	\$3,173,125	\$625,758	\$3,724,596	\$36,020,059	\$756,532	\$1,759,600	\$486,180
Salaries <sup>18</sup> .....	\$14,869,896	\$4,604,627	\$591,323	\$50,599	\$568,067	\$5,917,481	\$99,804	\$594,731	\$324,261
Number of man-hours worked by wage earners, total.....	66,479,163	5,148,955	6,535,088	1,239,002	3,264,995	38,621,198	1,158,476	1,714,701	389,761
Drilling wells and rig building.....	40,809,461	.....	7,081	33,161	2,959,044	37,594,499	.....	.....	.....
Operating and maintaining wells.....	299,596	.....	.....	.....	.....	101,809	.....	.....	.....
Doing other work.....	25,270,106	5,148,955	6,528,007	1,205,841	305,951	924,890	1,158,476	1,714,701	389,761
Average number of wage earners on active days, total <sup>20</sup> .....	43,308	2,685	3,788	840	3,540	25,190	962	842	257
Full-time workers.....	27,491	2,281	2,375	484	858	16,621	453	815	199
Part-time workers.....	15,817	404	1,413	356	2,682	8,569	509	27	58
Drilling wells and rig building, total.....	28,094	.....	8	35	3,321	24,559	.....	.....	.....
Full-time workers.....	17,047	.....	4	5	725	16,229	.....	.....	.....
Part-time workers.....	11,047	.....	2	30	2,596	8,330	.....	.....	.....
Operating and maintaining wells, total.....	230	.....	.....	.....	.....	69	.....	.....	.....
Full-time workers.....	143	.....	.....	.....	.....	53	.....	.....	.....
Part-time workers.....	87	.....	.....	.....	.....	16	.....	.....	.....
Doing other work, total.....	14,984	2,685	3,782	805	219	562	962	842	257
Full-time workers.....	10,301	2,281	2,371	479	133	339	453	815	199
Part-time workers.....	4,683	404	1,411	326	86	223	509	27	58
Average number of days active <sup>21</sup> .....	289	324	318	289	283	281	250	347	241
Average hourly earning of wage earners.....	\$0.85	\$0.72	\$0.49	\$0.51	\$1.14	\$0.93	\$0.85	\$1.03	\$1.25
Horsepower rating of power equipment <sup>22</sup> .....	1,096,361	86,037	150,086	16,700	14,847	678,235	14,533	38,171	13,630
Per wage earner.....	27.4	33.0	40.0	20.7	4.3	30.1	16.8	45.6	53.0

Statistics cover oil- and gas-field services performed by contractors (or indirectly by subcontractors) for companies operating or drilling oil or gas wells, whether or not the work was performed on the basis of a formally written contract. Statistics exclude oil- and gas-field work performed on contract by concerns that also operated oil and gas wells for their own account unless separate reports were obtained for each of these two types of activities. A total of \$7,288,351 was received for oil- and gas-field services performed on contract for which statistics are excluded from tables 22 through 50; of this amount, \$5,083,338 was received by concerns engaged principally in work for their own account and \$2,185,013 by concerns engaged principally in contract work. Statistics are also excluded for concerns rendering oil- and gas-field services or producing crude petroleum, natural gas, or natural gasoline whose reports covering these activities indicated that neither the value of products and services rendered, nor reported principal expenses, nor cost of buildings, machinery, and equipment, nor cost of drilling and equipping wells amounted to as much as \$2,500 during 1939. Statistics for small contractors thus excluded are shown only in tables 49 and 50. Statistics exclude construction of pipe lines other than those laid in connection with drilling operations. The total amount received or due for oil- and gas-field services performed on contract and of the type considered properly within the scope of the Census of Mineral Industries amounted to \$211,285,768. Of this total, \$203,843,917 was received by or due to contractors (for whom statistics are summarized in this table); \$153,500 was received by contractors (for whom statistics are summarized in table 49) whose oil- or gas-field services performed in 1939 were valued at less than \$2,500; and \$7,288,351 was received for contract work performed in 1939 (summarized in table 12) by concerns that operated or drilled wells for their own account and from whom complete separate reports covering the contract work were not obtained. The total amount paid for oil- and gas-field services performed on contract in 1939 as reported to the Census of Mineral Industries amounts to \$198,903,782. The difference between this total amount paid for contract work and the total amount received for contract work is due principally to the omission from the amount paid of payments by contractors to subcontractors and the inclusion with the amounts actually received of amounts due for contract work performed during the year. In this table and in tables 24 through 49 each contractor was classified according to the major type of work performed during the year except that contractors engaged in drilling wells for oil and gas were all classified in the column headed "Drilling oil, gas, and dry wells."

<sup>2</sup> Of the total amount received or due contractors thus classified, \$12,642,113 was reported by concerns engaged principally in geophysical exploration work, including core and shot-hole drilling, and \$5,028,510 by concerns engaged principally in well surveying, chiefly electrical logging.

<sup>3</sup> Many of the contractors engaged principally in hauling were also engaged in excavating; similarly, many of the contractors engaged principally in excavating were also engaged in hauling. Moreover, both the hauling and excavating contractors reported a considerable amount of oil- and gas-field road building. Although contractors classified under other types of activities also did some hauling, excavating, and road building, it is believed that the statistics for contractors classified under the headings "Hauling oil- and gas-field supplies and equipment" and "Excavating slush pits and cellars, grading, and building foundations at well locations" accounted for the bulk of this type of contract work.

<sup>4</sup> Principal other work reported by contractors engaged chiefly in building, repairing, and dismantling rigs and derricks was installation of production equipment and construction of foundations at well locations.

<sup>5</sup> Includes a few contractors who specialized in "spudding in" (drilling only the first few feet of hole) or in "drilling in" or "tailing in" (drilling) through the cap rock into the oil reservoir. Other work performed by contractors engaged in drilling oil, gas, and dry wells included deepening wells previously drilled and virtually all of the types specified in the other columns, especially cleaning out and bailing wells, running and pulling casing, shooting wells, acidizing wells, drilling water wells, and operating oil and gas wells.

<sup>6</sup> Includes 6 concerns who were engaged chiefly in plugging wells; these concerns reported \$76,012 received or due for work performed. Principal other work reported by contractors engaged chiefly in running, cutting, and pulling casing, tubes, and rods was swabbing, cleaning, and plugging wells.

<sup>7</sup> Principal other work reported by contractors engaged chiefly in cementing wells was well surveying, testing, and acidizing.

<sup>8</sup> Includes making torpedoes used in shooting wells. Amount received or due for shooting wells includes the cost of explosives consumed.

<sup>9</sup> Includes 2 concerns engaged chiefly in fishing for tools and equipment. Principal other work reported by contractors engaged chiefly in perforating casing was fishing for tools and equipment.

<sup>10</sup> Other work reported by contractors engaged chiefly in acidizing and other chemical treatment of wells included a small amount of cementing work.

<sup>11</sup> Principal other work reported by contractors engaged chiefly in cleaning out, bailing, and swabbing wells was running and pulling tubing and plugging wells.

175

**OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS**  
**TABLE 22.—PRINCIPAL STATISTICS FOR OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS IN THE**  
**UNITED STATES, BY MAJOR TYPE OF WORK: 1939—Continued**

ITEM	Perforating well casing <sup>9</sup>	Acidizing and other chemical treatment of wells <sup>10</sup>	Cleaning out, bailing, and swabbing wells <sup>11</sup>	Drilling water wells <sup>12</sup>	Installing production equipment (such as wellhead fittings, pumps, and engines)	Erecting, cleaning, repairing, and dismantling lease tanks <sup>13</sup>	Operating and main- taining wells <sup>14</sup>	Oil- and gas-field machine- shop and repair work <sup>15</sup>	General well serv- icing <sup>16</sup>
Number of contracting concerns.....	10	10	37	22	12	33	8	97	83
Number of persons engaged, total.....	499	374	618	162	156	707	174	1,461	1,896
Wage earners (average for the year, including inactive periods) <sup>17</sup> .....	294	202	533	125	142	614	158	1,152	1,695
Salaried employees <sup>18</sup> .....	204	187	55	12	4	67	11	207	111
Proprietors and firm members (not applicable to corporations).....	1	5	30	25	10	28	5	102	90
Performing manual labor.....	1	3	5	11	1	13	2	57	24
Amount received or due for services performed <sup>19</sup> .....	\$2,777,137	\$3,285,312	\$1,586,048	\$404,076	\$327,297	\$2,415,007	\$411,427	\$5,833,144	\$4,864,982
Production for the account of other concerns: Crude petroleum (barrels of 42 gallons).....									
Natural gas (thousands of cu. ft.).....									
Wages and salaries paid.....	\$1,161,579	\$710,753	\$735,537	\$142,679	\$124,388	\$798,448	12,446		
Salaries <sup>18</sup> .....	\$691,033	\$247,115	\$643,011	\$120,369	\$118,328	\$648,169	180		
Number of man-hours worked by wage earners, total.....	\$470,546	\$463,638	\$92,526	\$22,310	\$6,080	\$150,259	\$270,183	\$2,306,799	\$2,053,858
Drilling wells and rig building.....	746,662	375,077	803,902	194,874	165,098	1,028,109	297,787	2,223,786	2,551,592
Operating and maintaining wells.....				168,883					46,793
Doing other work.....	746,662	375,077	803,902	26,091	185,098	1,028,109	297,787	2,223,786	2,504,799
Average number of wage earners on active days, total <sup>20</sup> .....	294	199	597	135	149	653	161	1,165	1,651
Full-time workers.....	288	158	302	82	70	378	90	972	1,085
Part-time workers.....	6	41	295	53	79	275	71	193	786
Drilling wells and rig building, total.....				121					52
Full-time workers.....				69					15
Part-time workers.....				52					37
Operating and maintaining wells, total.....							161		
Full-time workers.....							90		
Part-time workers.....							71		
Doing other work, total.....	294	199	597	14	149	653		1,165	1,799
Full-time workers.....	288	158	302	13	70	378		972	1,050
Part-time workers.....	6	41	295	1	79	275		193	749
Average number of days active <sup>21</sup> .....	358	343	281	263	280	296	358	303	279
Average hourly earning of wage earners.....	\$0.93	\$0.68	\$0.60	\$0.62	\$0.64	\$0.63	\$0.65	\$0.78	\$0.70
Horsepower rating of power equipment <sup>22</sup> .....	6,762	4,109	8,182	3,298	3,135	1,881	1,875	14,182	40,760
Per wage earner.....	23.0	20.3	15.3	26.4	22.1	3.1	11.9	12.3	24.0

<sup>12</sup> Includes operations of contractors who were engaged chiefly in locating water and drilling both water-supply wells and water-intake holes (for oil-well flooding purposes) for oil and gas companies. Some water-well drilling for persons or concerns in other industries, such as farmers, is also included when such drilling was performed incidentally to work for oil and gas companies.

<sup>13</sup> Principal other work reported by contractors engaged chiefly in erecting, cleaning, repairing, and dismantling lease tanks was painting other equipment, building firewalls, digging slush ponds, and cleaning sumps.

<sup>14</sup> It should be noted that most of the work of operating wells on contract was performed by concerns that were engaged principally in operating wells for their own account; the amount received by the latter for operating wells for the account of others was \$2,450,855 which is not included in the figures in this column (see table 12).

<sup>15</sup> Includes contractors whose principal oil- and gas-field services were welding casing, rigs, and other equipment; tool recutting and reconditioning; repairing engines and boilers; insulating boilers and steam lines; and pipe threading. Other work performed by these contractors includes some manufacturing of oil-well tools and some repair of farm machinery. Contractors who reported substantial amounts of machine-shop and repair work other than repair or maintenance of oil- and gas-field machinery and equipment were requested to revise their reports to cover only the latter type of activity.

<sup>16</sup> Includes statistics for contractors engaged chiefly in performing oil- and gas-field services (a) whose principal oil- and gas-field work was of a type not specified in previous columns (such as fighting oil- and gas-well fires and bringing under control wild wells), (b) who performed several types of work specified in the preceding columns but did not or could not indicate the major type (all specified types of work except drilling were represented), and (c) who did not clearly specify the major type of work performed (including those who described their work only by such a term as "well servicing").

<sup>17</sup> Represents statistics for employees who perform manual labor, use tools, operate machines, and care for wells and oil- and gas-field property. The averages were derived by adding the numbers reported for each month and dividing the sums by 12, regardless of the number of months during which the wage earners were active.

<sup>18</sup> Represents statistics for salaried employees of contractors at offices and in the field, including officers of corporations; managers, superintendents, and other supervisory personnel; responsible professional and technical employees; and clerical employees. The number of salaried employees represents the number receiving pay during the normal pay-roll period ending nearest October 14. Salaries represent the total amount paid to salaried employees during the calendar year.

<sup>19</sup> Represents the total amount received by or due contractors for work done during the year. In cases where part of the amount received was in oil or gas, the value of the oil or gas is included in the total amount received.

<sup>20</sup> Each contractor was requested to report averages computed by adding the numbers of wage earners receiving pay on each active pay-roll period and dividing this sum by the number of active periods. The sum of these averages is usually higher than the "Number of wage earners (average for the year, including inactive periods)" presented elsewhere in this table because the latter is, whereas the former is not, affected by figures for months during which no wage earners (except possibly maintenance men) were employed by the contractor. Contractors were requested to report as part-time wage earners those wage earners who worked substantially fewer hours per week than the number of hours in the full-time workweek.

<sup>21</sup> Computed by estimating approximately the total number of man-shifts worked by wage earners (computed separately for each concern by multiplying the reported number of days that concern was engaged in contract work by the average number of wage earners on active days) and dividing this total by the sum of the average numbers of wage earners on active days. For concerns that were operated entirely by working proprietors, the working proprietors were treated as wage earners for purposes of the described computation. The average number of days on which concerns were engaged in contract work is thus more heavily weighted by concerns that had the larger numbers of workers.

<sup>22</sup> Aggregate horsepower rating of prime movers and of electric motors driven by purchased energy, in use or available for use at the end of the year. Statistics include stationary and mobile equipment such as drilling units, casing-pulling machines, trucks (including specially equipped survey trucks, cementing trucks, and shooting trucks), tractors, bulldozers, and airplanes used in photogrammetric survey work.

(Continued from page 173)

and other chemical treatment of wells the proportion was 45 percent. These activities require many skilled technical and professional employees such as geologists, geophysicists, geochemists, chemists, and engineers in addition to supervisory personnel.

About 86 percent of the persons engaged in oil- and gas-field contract work were reported by contractors who did all or most of their work in six States. Ranked in order of number of persons engaged, these States were Texas, Illinois, California, Oklahoma, Louisiana, and Kansas. About 53 percent of all persons engaged in contract work in all States were reported by drilling contractors.

The number of wage earners employed by all contractors increased during the year from a low point of 36,401 in January to a peak of 42,850 in November. Data on monthly employment were collected for wage earners only.

The reported average numbers of wage earners, for active days only, totaled 43,308; of these, 27,491 were full-time workers and 15,817, or 37 percent, were part-time workers. Contractors were requested to report as part-time wage earners all those who worked substantially fewer hours per week than the number of hours in the full-time workweek.<sup>7</sup> Part-time workers constituted more than half the wage earners employed by contractors engaged principally in building, repairing, and dismantling rigs and derricks; in running, cutting, and pulling casing, tubes, and rods; and in installing production equipment.

Wage earners employed by contractors worked a total of 66,479,000 man-hours—40,809,000 in drilling wells and rig building, 400,000 in operating and maintaining wells, and 25,270,000 in doing other work. Oil- and gas-field contractors as a whole were active an average of 289 days during the year. Drilling contractors averaged 281 days.

#### WAGES AND SALARIES

Employees of contractors were paid wages and salaries totaling \$71,289,000—almost one-third as much as the wages and salaries paid by companies operating or drilling oil and gas wells for their own account. Salaries paid by contractors during the year represented 21 percent of the total wage and salary payments. In acidizing and other chemical treatment of wells, exploration and well surveying, perforating well casing, and shooting wells—in which much of the work is performed by technical and professional employees—salaries represented 65, 56, 41, and 40 percent, respectively, of the total wage and salary payments.

<sup>7</sup>It is possible that some part-time wage earners may have worked for more than one contractor and were reported more than once.

Wages aggregating \$56,419,000 were paid for a total of 66,479,000 man-hours of labor, an average of \$0.85 per man-hour. Average hourly earnings ranged between \$0.49 received by wage earners employed by hauling contractors and \$1.25 by wage earners employed in shooting wells. The average hourly earning of wage earners employed by drilling contractors was \$0.93; those employed by contractors engaged principally in exploration and well-surveying work averaged \$0.72; those employed by contracting concerns specializing in cementing wells, \$1.03; and those employed by contractors engaged chiefly in building, repairing, and dismantling rigs and derricks, \$1.14. Hourly earnings of wage earners employed by contractors classified by States in which all or most of the work was done ranged from 56 cents in Indiana to 96 cents in Colorado. The average for Texas was 83 cents; for Illinois, 92 cents; for California, 94 cents; for Louisiana, 89 cents; for Oklahoma, 79 cents; and for Kansas, 92 cents. These figures for hourly earnings are approximate averages for all wage earners and should not be interpreted as hourly wage rates. The latter apply to specific occupations (such as rig builder, rotary driller, rotary driller's helper, tool dresser, truck driver, roustabout, and pumper) and frequently take into account special conditions of work.

#### POWER EQUIPMENT

Oil- and gas-field development requires a large amount of power equipment. Prime movers and electric motors driven by purchased energy in use or available for use by oil- and gas-field contractors at the end of 1939 had an aggregate capacity of 1,096,000 horsepower. This horsepower capacity was approximately equal to that of the power equipment in all the stone-quarrying industries combined and was slightly greater than that of the anthracite-mining industry. About 98 percent of the aggregate horsepower represented 10,845 prime movers such as steam engines and internal-combustion engines; the remainder represented 1,478 electric motors driven by purchased energy. Drilling contractors reported 4,858 prime movers and 185 electric motors driven by purchased energy; the aggregate horsepower rating of these units was 678,000—62 percent of the total for all contractors.

The horsepower rating of power equipment for all oil- and gas-field contractors averaged 27 per wage earner. The average for drilling contractors was 30; for those engaged principally in exploration and well-surveying work, 33; for those engaged chiefly in hauling, 40; for those specializing in cementing wells, 46; and for those engaged principally in building, repairing, and dismantling rigs and derricks, 4.

## OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS

177

TABLE 23.—PRINCIPAL STATISTICS FOR OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	Arkansas	California	Colorado	Illinois	Indiana	Kansas	Kentucky	Louisiana	Michigan
Number of contracting concerns.....	1,888	19	149	5	168	20	164	19	90	65
Number of persons engaged, total.....	46,939	1,155	4,214	13	5,464	158	2,979	178	3,193	953
Wage earners (average for the year, including inactive periods).....	40,061	1,079	3,539	8	4,776	120	2,645	138	2,859	701
Salaried employees.....	5,153	64	558	.....	504	11	186	12	265	207
Proprietors and firm members (not applicable to corporations).....	1,725	12	117	5	184	27	148	28	69	45
Performing manual labor.....	637	.....	58	4	61	12	53	11	11	21
Amount received or due for services performed.....	\$208,843,917	\$5,980,503	\$18,896,959	\$112,288	\$25,324,394	\$722,953	\$11,891,303	\$503,900	\$13,480,357	\$4,883,752
Production for the account of other concerns:										
Crude petroleum (bbl. of 42 gal.)..	1,384,685	737,830	74,299	50,360	97,976	.....	9,796	.....	.....	76,989
Natural gas (thousands of cu. ft.)..	12,654,045	.....	23,326	.....	.....	.....	650	6,800	.....	37,142
Wages and salaries paid.....	\$71,289,073	\$1,758,231	\$7,745,335	\$21,585	\$8,425,969	\$151,660	\$4,172,139	\$148,808	\$4,545,482	\$1,490,792
Wages.....	\$56,419,177	\$1,514,629	\$5,915,767	\$21,585	\$7,100,358	\$128,641	\$3,535,971	\$131,264	\$3,809,127	\$986,963
Salaries.....	\$14,869,896	\$243,602	\$1,829,568	.....	\$1,325,611	\$23,019	\$636,168	\$17,542	\$736,355	\$503,829
Number of man-hours worked by wage earners, total.....	66,479,163	1,758,647	6,293,877	22,372	7,728,125	228,047	3,826,389	168,031	4,284,205	1,170,393
Drilling wells and rig building....	40,809,461	1,556,221	2,823,928	12,000	5,875,614	116,107	2,656,656	134,946	3,094,516	768,249
Operating and maintaining wells....	399,598	.....	48,875	.....	1,064	.....	1,956	.....	.....	12,079
Doing other work.....	25,270,106	202,426	3,421,076	10,372	1,851,447	111,940	967,777	33,085	1,189,689	392,065
Average number of wage earners on active days, total.....	43,308	1,093	3,674	10	5,095	180	2,871	166	3,135	777
Full-time workers.....	27,491	791	2,679	9	2,860	126	1,509	92	1,637	549
Part-time workers.....	15,817	302	995	1	2,235	54	1,362	74	1,498	228
Drilling wells and rig building, total.....	28,064	974	1,741	5	3,898	135	2,174	145	2,367	557
Full-time workers.....	17,047	719	1,271	5	2,192	87	1,109	77	1,170	377
Part-time workers.....	11,047	255	470	.....	1,706	48	1,065	68	1,197	180
Operating and maintaining wells, total.....	230	.....	27	.....	1	.....	1	.....	.....	7
Full-time workers.....	143	.....	17	.....	1	.....	1	.....	.....	6
Part-time workers.....	87	.....	10	.....	.....	.....	.....	.....	.....	1
Doing other work, total.....	14,984	119	1,906	5	1,196	45	696	21	768	213
Full-time workers.....	10,301	72	1,391	4	687	39	399	15	467	166
Part-time workers.....	4,683	47	515	1	509	6	297	6	301	47
Average number of days active.....	289	331	313	288	308	185	245	213	298	275
Average hourly earning of wage earners.....	\$0.85	\$0.86	\$0.94	\$0.96	\$0.92	\$0.56	\$0.92	\$0.78	\$0.89	\$0.84
Horsepower rating of power equipment..	1,096,381	18,457	121,815	783	110,089	2,180	79,046	3,612	61,677	10,789
Per wage earner.....	27.4	17.1	34.4	97.9	23.1	18.2	29.9	27.6	21.6	15.4

  

ITEM	Montana	New Mexico	New York	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Wyoming	Miss., Mo., and Nebr.
Number of contracting concerns.....	20	32	33	39	204	140	658	39	18	6
Number of persons engaged, total.....	133	925	244	284	3,734	1,247	20,966	497	556	48
Wage earners (average for the year, including inactive periods).....	105	827	203	232	3,220	1,011	17,602	444	516	36
Salaried employees.....	11	63	12	19	334	62	2,801	15	24	5
Proprietors and firm members (not applicable to corporations).....	17	35	29	33	180	174	563	38	16	7
Performing manual labor.....	8	6	16	17	60	92	158	16	8	1
Amount received or due for services performed.....	\$482,205	\$3,813,026	\$838,534	\$636,159	\$13,211,972	\$3,180,242	\$94,849,037	\$1,409,018	\$3,433,844	\$193,491
Production for the account of other concerns:										
Crude petroleum (bbl. of 42 gal.)..	3,800	.....	.....	.....	60,424	2,321	270,780	.....	110	.....
Natural gas (thousands of cu. ft.)..	.....	.....	.....	.....	12,249,976	331,909	707	.....	.....	3,535
Wages and salaries paid.....	\$162,036	\$1,315,182	\$299,493	\$293,161	\$4,691,986	\$1,371,680	\$33,021,870	\$559,547	\$1,037,209	\$76,910
Wages.....	\$142,829	\$1,159,935	\$272,159	\$266,751	\$3,831,582	\$1,250,281	\$24,929,574	\$517,824	\$843,350	\$80,607
Salaries.....	\$19,207	\$155,247	\$27,334	\$26,410	\$860,404	\$121,399	\$8,092,296	\$41,723	\$193,879	\$16,303
Number of man-hours worked by wage earners, total.....	153,150	1,420,823	380,665	292,308	4,878,768	1,760,766	29,980,387	708,909	1,349,952	73,319
Drilling wells and rig building....	102,062	1,072,120	266,291	259,015	3,041,459	1,870,970	15,354,572	876,653	1,049,064	59,030
Operating and maintaining wells....	.....	.....	.....	.....	22,368	.....	313,254	.....	.....	.....
Doing other work.....	51,088	348,703	92,374	33,293	1,814,941	89,816	14,312,561	32,256	300,908	14,289
Average number of wage earners on active days, total.....	138	871	241	284	3,579	1,197	18,835	525	574	63
Full-time workers.....	100	558	199	169	2,125	950	12,438	250	389	61
Part-time workers.....	38	313	42	115	1,454	247	6,397	275	185	2
Drilling wells and rig building, total.....	98	610	194	249	2,239	1,139	10,635	500	391	43
Full-time workers.....	69	432	163	150	1,313	816	6,442	235	279	41
Part-time workers.....	29	178	31	99	926	223	4,193	265	112	2
Operating and maintaining wells, total.....	.....	.....	.....	.....	16	.....	178	.....	.....	.....
Full-time workers.....	.....	.....	.....	.....	12	.....	106	.....	.....	.....
Part-time workers.....	.....	.....	.....	.....	4	.....	72	.....	.....	.....
Doing other work, total.....	40	261	47	35	1,324	58	8,022	25	183	20
Full-time workers.....	31	128	36	19	800	34	5,890	15	110	20
Part-time workers.....	9	135	11	16	524	24	2,132	10	73	.....
Average number of days active.....	186	323	233	196	228	225	302	256	335	160
Average hourly earning of wage earners.....	\$0.93	\$0.82	\$0.71	\$0.91	\$0.79	\$0.71	\$0.83	\$0.73	\$0.62	\$0.83
Horsepower rating of power equipment..	3,033	25,270	7,114	3,091	99,698	24,141	494,777	10,738	16,886	985
Per wage earner.....	28.9	30.6	35.0	13.3	31.0	23.9	28.1	24.2	36.6	27.4

<sup>1</sup> For definition of contract services covered see table 22, footnote 1; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. For an indication of the extent to which concerns were engaged in work in more than one State see appropriate footnotes to tables 31 through 35 and 37 through 48. In addition to the States designated in this table, some of the contractors performed work in Alabama, Arizona, Delaware, Florida, Georgia, Iowa, North Dakota, South Dakota, Tennessee, and Utah.

## MINERAL INDUSTRIES

TABLE 24.—NUMBER OF WAGE EARNERS EMPLOYED BY OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY MAJOR TYPE OF WORK, BY STATE, AND BY MONTH: 1939<sup>1</sup>

TYPE OF WORK AND STATE	Average for the 12 months, including inactive periods	NUMBER RECEIVING PAY DURING PAY-ROLL PERIOD ENDING NEAREST THE 15th OF THE MONTH											
		Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.
United States, total.....	40,061	36,401	36,625	37,654	38,474	41,203	40,575	41,235	40,928	40,206	42,350	42,850	42,195
TYPE OF WORK													
Exploration and well-surveying work.....	2,604	2,654	2,687	2,716	2,595	2,602	2,713	2,752	2,728	2,579	2,427	2,428	2,370
Hauling oil- and gas-field supplies and equipment.....	3,750	3,517	3,646	3,663	3,629	3,632	3,565	3,734	3,712	3,737	4,005	4,050	4,089
Excavating slush pits and cellars, grading, and building foundations at well locations..	806	700	769	711	817	816	780	917	877	888	772	825	794
Building, repairing, and dismantling rigs and derricks.....	3,478	3,016	3,163	3,122	3,380	3,723	3,365	3,532	3,549	3,336	3,969	3,767	3,811
Drilling oil, gas, and dry wells.....	22,548	20,156	19,934	20,767	21,193	23,350	23,193	23,454	23,132	22,618	24,123	24,566	24,084
Running, cutting, and pulling casing, tubes, and rods.....	865	732	735	865	901	884	913	918	867	910	918	865	876
Cementing wells.....	838	817	813	806	819	813	832	857	860	855	842	855	886
Shooting wells.....	257	257	251	249	247	266	258	256	256	260	256	260	269
Perforating well casing.....	294	321	324	314	301	307	294	281	282	274	276	279	276
Acidizing and other chemical treatment of wells.....	202	188	188	186	196	211	210	205	208	207	218	213	199
Cleaning out, bailing, and swabbing wells...	533	397	429	501	525	521	524	553	588	616	610	585	551
Drilling water wells.....	125	117	130	136	137	139	124	121	119	105	122	127	122
Installing production equipment (such as wellhead fittings, pumps, and engines)....	142	120	113	151	152	139	155	140	172	170	124	157	116
Erecting, cleaning, repairing, and dismantling lease tanks.....	614	611	659	588	605	671	690	618	567	577	596	582	610
Operating and maintaining wells.....	158	141	138	129	208	173	175	162	145	148	155	163	161
Oil- and gas-field machine shop and repair work.....	1,152	1,069	1,137	1,181	1,148	1,147	1,151	1,147	1,134	1,161	1,196	1,190	1,168
General well servicing.....	1,695	1,568	1,509	1,589	1,623	1,809	1,813	1,838	1,732	1,765	1,741	1,938	1,813
STATE													
Arkansas.....	1,079	977	869	1,060	1,159	1,172	1,256	1,215	1,163	1,044	1,009	1,052	973
California.....	3,539	3,323	3,365	3,329	3,386	3,548	3,698	3,805	3,817	3,505	3,679	3,564	3,435
Colorado.....	8	7	3	3	8	8	8	10	8	8	8	11	7
Illinois.....	4,776	4,174	4,114	4,172	4,355	4,862	4,549	4,940	4,891	4,998	5,316	5,450	5,494
Indiana.....	120	88	101	105	123	115	106	127	119	151	163	131	114
Kansas.....	2,645	2,347	2,196	2,287	2,625	2,784	2,852	2,706	2,742	2,629	2,753	2,954	2,871
Kentucky.....	136	140	121	126	167	159	142	118	139	129	136	147	132
Louisiana.....	2,859	2,552	2,623	2,615	2,766	3,006	2,693	2,925	3,018	2,927	3,159	3,094	2,933
Michigan.....	701	599	617	621	625	728	708	742	765	768	781	741	705
Montana.....	105	79	58	84	82	111	115	119	103	104	130	147	126
New Mexico.....	827	816	753	869	925	848	718	751	864	794	838	851	894
New York.....	203	156	158	187	203	207	214	194	213	231	222	229	222
Ohio.....	232	167	176	180	176	219	271	276	249	279	271	292	230
Oklahoma.....	3,220	2,919	2,855	3,017	3,184	3,581	3,410	3,350	3,353	3,118	3,130	3,257	3,490
Pennsylvania.....	1,011	704	740	831	976	1,029	1,027	954	1,031	1,074	1,190	1,243	1,227
Texas.....	17,602	16,692	17,197	17,248	16,848	17,835	17,745	17,929	17,244	17,222	18,391	18,566	18,307
West Virginia.....	444	341	302	320	331	445	459	486	495	543	529	564	516
Wyoming.....	516	319	372	484	507	533	569	600	636	622	591	500	462
Mississippi, Missouri, and Nebraska.....	36	1	1	6	26	33	37	38	58	59	54	57	57

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 through 16.



## OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS

179

TABLE 25.—NUMBER AND RATED HORSEPOWER CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS OF OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY MAJOR TYPE OF WORK AND BY STATE: 1939<sup>1</sup>

TYPE OF WORK AND STATES	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			
		Number	Horsepower	Number	Horsepower	Number	Horsepower
United States, total.....	1,096,381	10,845	1,071,899	1,478	24,482	384	21,475
TYPE OF WORK							
Exploration and well-surveying work.....	86,037	1,126	85,813	139	224	.....	.....
Hauling oil- and gas-field supplies and equipment.....	150,086	2,082	149,946	40	120	.....	.....
Excavating slush pits and cellars, grading, and building foundations at well locations.....	16,700	263	16,700	.....	.....	4	85
Building, repairing, and dismantling rigs and derricks.....	14,847	205	14,221	21	626	.....	.....
Drilling oil, gas, and dry wells.....	678,235	4,658	664,896	185	13,339	340	20,921
Running, cutting, and pulling casing, tubes, and rods.....	14,533	195	14,121	8	412	3	2
Cementing wells.....	38,171	449	38,171	.....	.....	.....	.....
Shooting wells.....	13,630	193	13,630	.....	.....	.....	.....
Perforating well casing.....	6,782	79	6,365	97	397	.....	.....
Acidizing and other chemical treatment of wells.....	4,109	109	4,000	35	109	.....	.....
Cleaning out, bailing, and swabbing wells.....	8,162	121	7,947	2	215	17	128
Drilling water wells.....	3,296	72	3,284	11	12	.....	.....
Installing production equipment (such as wellhead fittings, pumps, and engines).....	3,135	35	2,164	146	971	.....	.....
Erecting, cleaning, repairing, and dismantling lease tanks.....	1,881	39	1,757	41	124	.....	.....
Operating and maintaining wells.....	1,875	33	1,875	.....	.....	.....	.....
Oil- and gas-field machine-shop and repair work.....	14,182	469	8,381	707	5,801	20	339
General well servicing.....	40,760	537	38,628	46	2,132	.....	.....
STATE							
Arkansas.....	18,457	164	18,457	.....	.....	3	15
California.....	121,815	936	119,373	361	2,442	30	378
Colorado.....	783	24	778	1	5	.....	.....
Illinois.....	110,089	1,161	105,381	45	4,708	61	4,272
Indiana.....	2,180	61	2,180	.....	.....	1	6
Kansas.....	79,046	680	78,175	119	2,871	30	2,384
Kentucky.....	3,812	63	3,812	.....	.....	.....	.....
Louisiana.....	61,677	799	60,434	80	1,243	57	1,682
Michigan.....	10,789	215	10,647	46	142	14	23
Montana.....	3,033	39	2,986	7	47	4	10
New Mexico.....	25,270	219	24,495	8	775	5	10
New York.....	7,114	84	7,114	.....	.....	.....	.....
Ohio.....	3,091	77	3,091	.....	.....	.....	.....
Oklahoma.....	99,698	887	97,947	105	1,751	60	7,321
Pennsylvania.....	24,141	344	23,999	19	142	8	48
Texas.....	494,777	4,784	485,226	679	9,551	100	4,351
West Virginia.....	10,738	158	10,738	.....	.....	.....	.....
Wyoming.....	18,886	131	18,081	8	805	9	985
Mississippi, Missouri, and Nebraska.....	985	21	985	.....	.....	2	10

<sup>1</sup>For definition of contract services covered see table 22, footnotes 1 through 16. Figures represent equipment in use or available for use at the end of the year.



## MINERAL INDUSTRIES

TABLE 26.—SELECTED STATISTICS FOR INCORPORATED AND FOR UNINCORPORATED CONCERNS ENGAGED IN OIL- AND GAS-FIELD CONTRACT WORK IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

STATE AND TYPE OF OWNERSHIP	Number of contract- ing concerns	Amount received or due for services performed	NUMBER OF PERSONS ENGAGED					Wages	Salaries
			Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
						Total	Perform- ing manual labor		
United States, total.....	1,888	\$203,843,917	46,939	40,061	5,153	1,725	637	\$56,419,177	\$14,869,896
Incorporated.....	529	133,110,528	26,666	22,556	4,110	.....	.....	34,886,420	13,013,877
Unincorporated.....	1,359	70,733,389	20,273	17,505	1,043	1,725	637	21,532,757	1,856,019
Arkansas, total.....	19	5,980,503	1,155	1,079	64	12	.....	1,514,629	243,602
Incorporated.....	8	3,263,606	588	550	36	.....	.....	854,288	184,327
Unincorporated.....	11	2,716,897	567	529	28	12	.....	660,341	59,275
California, total.....	149	18,896,959	4,214	3,539	558	117	58	5,915,767	1,829,568
Incorporated.....	56	15,285,784	3,269	2,808	481	.....	.....	4,812,821	1,709,088
Unincorporated.....	93	3,611,175	945	731	97	117	58	1,102,946	120,480
Colorado <sup>2</sup> .....	5	112,268	13	8	.....	5	4	21,585	.....
Illinois, total.....	168	25,324,394	5,464	4,776	504	184	61	7,100,358	1,325,611
Incorporated.....	35	18,514,813	3,416	3,030	386	.....	.....	4,994,607	1,159,534
Unincorporated.....	133	6,809,581	2,048	1,746	118	184	61	2,105,751	166,077
Indiana, total.....	20	722,953	158	120	11	27	12	128,641	23,019
Incorporated.....	2	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	.....	.....	( <sup>3</sup> )	( <sup>3</sup> )
Unincorporated.....	18	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	27	12	( <sup>3</sup> )	( <sup>3</sup> )
Kansas, total.....	164	11,891,303	2,979	2,645	186	148	53	3,535,971	636,168
Incorporated.....	42	6,086,580	1,269	1,158	111	.....	.....	1,662,097	516,155
Unincorporated.....	122	5,804,723	1,710	1,487	75	148	53	1,873,874	120,013
Kentucky, total.....	19	503,900	176	138	12	26	11	131,264	17,542
Incorporated.....	5	219,948	60	55	5	.....	.....	58,915	13,749
Unincorporated.....	14	283,952	116	83	7	26	11	72,349	3,793
Louisiana, total.....	90	13,480,357	3,193	2,859	265	69	11	3,809,127	736,355
Incorporated.....	39	6,764,107	1,612	1,415	197	.....	.....	2,095,112	557,758
Unincorporated.....	51	6,716,250	1,581	1,444	68	69	11	1,714,015	178,597
Michigan, total.....	65	4,883,752	953	701	207	45	21	986,963	503,829
Incorporated.....	22	3,738,266	569	378	191	.....	.....	573,081	481,303
Unincorporated.....	43	1,145,486	384	323	16	45	21	413,882	22,526
Montana, total.....	20	482,205	133	105	11	17	8	142,829	19,207
Incorporated.....	3	59,412	17	12	5	.....	.....	14,180	10,991
Unincorporated.....	17	422,793	116	93	6	17	8	128,669	8,216
New Mexico, total.....	32	3,813,026	925	827	63	35	8	1,159,935	155,247
Incorporated.....	8	2,324,248	464	425	39	.....	.....	645,433	86,099
Unincorporated.....	24	1,488,778	461	402	24	35	8	514,502	69,148
New York, total.....	33	838,534	244	203	12	29	18	272,159	27,334
Incorporated.....	5	276,709	53	42	11	.....	.....	58,307	27,124
Unincorporated.....	28	561,825	191	161	1	29	18	213,852	210
Ohio, total.....	39	636,159	284	232	19	33	17	266,751	26,410
Incorporated.....	5	126,921	56	48	8	.....	.....	51,518	15,977
Unincorporated.....	34	509,238	228	184	11	33	17	215,233	10,433
Oklahoma, total.....	204	13,211,972	3,734	3,220	334	180	80	3,831,582	860,404
Incorporated.....	58	7,464,303	1,700	1,474	228	.....	.....	2,003,304	686,163
Unincorporated.....	146	5,747,669	2,034	1,746	106	180	80	1,828,278	174,241
Pennsylvania, total.....	140	3,180,242	1,247	1,011	62	174	92	1,250,281	121,399
Incorporated.....	9	746,448	160	109	51	.....	.....	181,491	103,277
Unincorporated.....	131	2,433,794	1,087	902	11	174	92	1,068,790	18,122
Texas, total.....	658	94,849,037	20,966	17,602	2,801	563	158	24,929,574	8,092,296
Incorporated.....	220	64,542,852	12,913	10,561	2,352	.....	.....	15,993,109	7,233,305
Unincorporated.....	438	30,306,185	8,053	7,041	449	563	158	8,936,465	858,991
West Virginia, total.....	39	1,409,018	497	444	15	38	16	517,824	41,722
Incorporated.....	5	305,474	59	54	5	.....	.....	85,506	23,245
Unincorporated.....	34	1,103,544	438	390	10	38	16	432,318	18,476
Wyoming, total.....	18	3,433,844	556	516	24	16	8	843,330	193,879
Incorporated.....	6	3,236,414	438	415	21	.....	.....	757,147	192,599
Unincorporated.....	12	197,430	120	101	3	16	8	86,183	1,280
Mississippi, Missouri, and Nebraska, total.....	6	193,491	48	36	5	7	1	60,607	16,303
Incorporated.....	1	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	.....	.....	( <sup>3</sup> )	( <sup>3</sup> )
Unincorporated.....	5	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	( <sup>3</sup> )	7	1	( <sup>3</sup> )	( <sup>3</sup> )

<sup>1</sup> For definition of contract services covered see table 22, footnote 1.<sup>2</sup> Unincorporated only; no incorporated contracting concerns were reported.<sup>3</sup> Not shown separately to avoid disclosure of confidential information.

## OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS

181

TABLE 27.—SELECTED STATISTICS FOR CONCERNS ENGAGED IN OIL- AND GAS-FIELD CONTRACT WORK IN THE UNITED STATES, CLASSIFIED BY AMOUNT RECEIVED OR DUE FOR SERVICES AND BY MAJOR TYPE OF WORK: 1939<sup>1</sup>

TYPE OF WORK AND AMOUNT RECEIVED OR DUE FOR SERVICES PERFORMED	Number of con- tracting concerns	Amount received or due for services performed	NUMBER OF PERSONS ENGAGED						Wages	Salaries
			Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members				
						Total	Perform- ing manual labor			
All types of work, total.....	1,888	\$203,843,917	46,939	40,061	5,153	1,725	637	\$56,419,177	\$14,869,896	
\$1-\$19,999.....	805	7,478,961	4,149	3,117	218	814	443	2,740,444	260,010	
\$20,000-\$49,999.....	409	13,180,293	5,091	4,294	400	397	112	4,554,702	672,044	
\$50,000-\$99,999.....	280	19,916,788	6,024	5,237	545	242	48	6,484,013	1,126,642	
\$100,000-\$249,999.....	219	33,951,380	7,972	6,923	862	187	29	9,754,908	2,280,168	
\$250,000-\$499,999.....	96	34,539,368	7,520	6,785	684	51	5	9,875,837	2,434,348	
\$500,000-\$999,999.....	48	32,591,483	6,336	5,375	937	26	.....	7,989,337	2,979,884	
\$1,000,000-\$2,499,999.....	25	35,641,305	6,366	5,331	1,047	8	.....	9,188,518	3,253,304	
\$2,500,000-\$4,999,999.....	5	.....	.....	.....	.....	.....	.....	.....	.....	
\$5,000,000 and over.....	1	28,566,359	3,459	2,999	480	.....	.....	5,871,618	1,883,496	
Exploration work and well surveying, total.....	76	17,670,423	4,317	2,804	1,667	46	18	3,688,106	4,604,627	
\$1-\$19,999.....	17	151,070	67	21	25	21	14	15,179	27,968	
\$20,000-\$49,999.....	18	619,921	162	96	51	15	3	145,099	143,660	
\$50,000-\$99,999.....	11	722,643	212	114	92	6	1	177,203	182,976	
\$100,000-\$249,999.....	13	1,957,433	454	204	246	4	.....	325,331	516,723	
\$250,000-\$499,999.....	8	2,852,474	678	513	165	.....	.....	728,288	847,283	
\$500,000-\$999,999.....	5	4,107,830	953	453	500	.....	.....	595,070	1,307,648	
\$1,000,000-\$2,499,999.....	3	.....	.....	.....	.....	.....	.....	.....	.....	
\$2,500,000-\$4,999,999.....	1	7,459,052	1,791	1,203	588	.....	.....	1,701,936	1,778,369	
Hauling oil- and gas-field supplies and equipment, total.....	172	10,471,871	4,290	3,750	343	197	73	3,173,125	591,323	
\$1-\$19,999.....	80	648,979	453	327	27	99	45	196,898	25,321	
\$20,000-\$49,999.....	36	1,183,898	512	442	32	38	15	335,358	36,712	
\$50,000-\$99,999.....	29	2,117,250	793	709	54	30	8	615,314	82,060	
\$100,000-\$249,999.....	19	2,814,320	939	841	74	24	5	807,616	132,922	
\$250,000-\$499,999.....	5	1,785,392	903	812	89	2	.....	643,849	159,009	
\$500,000-\$999,999.....	3	1,942,032	690	619	67	4	.....	574,090	155,299	
Excavating slush pits and cellars, grading, and building foundations at well locations, total.....	73	1,851,616	925	806	32	87	32	625,758	50,599	
\$1-\$19,999.....	46	424,175	292	233	7	52	29	128,394	6,284	
\$20,000-\$49,999.....	15	471,960	225	199	7	19	2	160,601	12,332	
\$50,000-\$99,999.....	9	603,316	230	202	17	11	.....	166,424	31,483	
\$100,000-\$249,999.....	3	352,165	178	172	1	5	1	150,339	500	
Building, repairing, and dismantling rigs and derricks, total.....	115	9,155,432	3,847	3,478	258	111	44	3,724,596	568,067	
\$1-\$19,999.....	53	526,616	391	322	9	60	34	242,846	8,383	
\$20,000-\$49,999.....	27	871,005	529	484	22	23	8	369,447	38,995	
\$50,000-\$99,999.....	16	1,128,802	514	450	47	17	.....	499,831	35,290	
\$100,000-\$249,999.....	9	1,322,363	526	482	36	8	2	494,101	78,568	
\$250,000-\$499,999.....	6	2,166,124	766	701	62	3	.....	860,078	163,694	
\$500,000-\$999,999.....	3	.....	.....	.....	.....	.....	.....	.....	.....	
\$1,000,000-\$2,499,999.....	1	3,118,524	1,121	1,039	82	.....	.....	1,228,693	243,139	
Drilling oil, gas, and dry wells, total.....	965	128,107,076	25,066	22,548	1,676	862	292	36,020,059	5,917,481	
\$1-\$19,999.....	374	3,574,793	1,740	1,327	66	347	188	1,410,783	92,242	
\$20,000-\$49,999.....	189	6,177,488	2,143	1,826	139	178	50	2,186,942	190,620	
\$50,000-\$99,999.....	152	10,938,220	2,927	2,572	220	135	28	3,685,980	516,434	
\$100,000-\$249,999.....	152	23,766,261	5,021	4,480	405	136	21	6,850,954	1,181,015	
\$250,000-\$499,999.....	65	23,477,121	3,944	3,652	254	38	5	6,212,762	1,074,126	
\$500,000-\$999,999.....	32	21,267,199	3,292	3,024	248	20	.....	5,208,595	1,116,082	
\$1,000,000-\$2,499,999.....	17	23,869,900	3,831	3,606	217	8	.....	6,636,587	989,176	
\$2,500,000-\$4,999,999.....	4	15,016,094	2,168	2,061	127	.....	.....	3,967,436	753,566	
Running, cutting, and pulling casing, tubes, and rods, total.....	98	1,753,089	1,025	865	56	104	41	756,532	99,804	
\$1-\$19,999.....	72	661,036	464	369	16	79	39	278,717	22,801	
\$20,000-\$49,999.....	17	469,066	259	224	19	16	2	198,918	22,600	
\$50,000-\$99,999.....	7	.....	.....	.....	.....	.....	.....	.....	.....	
\$100,000-\$249,999.....	2	622,985	302	272	21	9	.....	278,897	54,403	
Cementing wells, total.....	23	9,366,442	1,051	838	202	11	9	1,759,600	594,731	
\$1-\$19,999.....	8	64,991	28	16	6	6	4	15,650	5,850	
\$20,000-\$49,999.....	7	236,514	57	41	13	3	3	62,275	20,955	
\$50,000-\$99,999.....	4	268,778	40	33	5	2	2	58,563	12,400	
\$100,000-\$249,999.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
\$250,000-\$499,999.....	1	8,796,159	926	748	178	.....	.....	1,622,922	555,526	
\$5,000,000 and over.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Shooting wells, total.....	34	3,563,538	351	257	81	13	11	486,180	324,261	
\$1-\$19,999.....	11	110,597	32	17	7	8	8	20,850	5,418	
\$20,000-\$49,999.....	10	282,682	41	27	12	2	2	39,709	36,941	
\$50,000-\$99,999.....	8	590,562	67	52	14	1	1	84,061	41,442	
\$100,000-\$249,999.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
\$250,000-\$499,999.....	2	2,579,717	211	161	48	2	.....	341,560	240,459	
\$1,000,000-\$2,499,999.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Perforating well casing, total.....	10	2,777,137	499	294	204	1	1	691,033	470,546	
\$1-\$19,999.....	3	49,834	13	11	1	1	1	16,464	1,800	
\$20,000-\$49,999.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
\$50,000-\$99,999.....	2	209,856	36	31	5	.....	.....	77,368	11,100	
\$100,000-\$249,999.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
\$1,000,000-\$2,499,999.....	1	2,517,447	450	252	198	.....	.....	597,201	457,646	

<sup>1</sup> For definition of contract services covered see table 22, footnote 1. Each report was classified by major type of work performed and by amount received or due for services performed during the year.

## MINERAL INDUSTRIES

TABLE 27.—SELECTED STATISTICS FOR CONCERNS ENGAGED IN OIL- AND GAS-FIELD CONTRACT WORK IN THE UNITED STATES, CLASSIFIED BY AMOUNT RECEIVED OR DUE FOR SERVICES AND BY MAJOR TYPE OF WORK: 1939<sup>1</sup>—Continued

TYPE OF WORK AND AMOUNT RECEIVED OR DUE FOR SERVICES PERFORMED	Number of contracting concerns	Amount received or due for services performed	NUMBER OF PERSONS ENGAGED					Wages	Salaries
			Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
						Total	Perform- ing manual labor		
Acidizing and other chemical treatment, total.....	10	\$3,285,312	374	202	167	5	3	\$247,115	\$463,636
\$1-\$19,999.....	3								
\$20,000-\$49,999.....	2	81,865	17	6	8	3	3	8,729	13,997
\$50,000-\$99,999.....	3								
\$500,000-\$999,999.....	1	3,203,447	357	196	159	2	.....	236,386	449,641
\$1,000,000-\$2,499,999.....	1								
Cleaning out, bailing, and swabbing wells, total.....	37	1,586,048	618	533	55	30	5	643,011	92,526
\$1-\$19,999.....	18	159,658	81	57	9	15	3	60,039	9,345
\$20,000-\$49,999.....	11	377,454	156	137	8	11	2	152,140	9,989
\$50,000-\$99,999.....	6								
\$100,000-\$249,999.....	1	1,048,936	381	339	38	4	.....	430,832	73,192
\$250,000-\$999,999.....	1								
Drilling water wells, total.....	22	404,076	162	125	12	25	11	120,369	22,310
\$1-\$19,999.....	17	172,259	81	56	9	16	6	53,429	15,010
\$20,000-\$49,999.....	4								
\$50,000-\$99,999.....	1	231,817	81	69	3	9	5	66,940	7,300
Installation of production equipment (such as well- head fittings, pumps, and engines), total.....	12	327,297	156	142	4	10	1	118,328	6,060
\$1-\$19,999.....	5	47,161	36	31	.....	5	1	22,304	.....
\$20,000-\$49,999.....	4	94,226	53	46	4	3	.....	39,778	6,060
\$50,000-\$99,999.....	3	185,910	67	65	.....	2	.....	56,246	.....
Erecting, cleaning, repairing, and dismantling lease tanks, total.....	33	2,415,007	707	614	67	26	13	646,189	150,259
\$1-\$19,999.....	14	119,809	67	48	4	15	10	33,454	6,364
\$20,000-\$49,999.....	11	363,816	122	101	12	9	3	107,066	13,270
\$50,000-\$99,999.....	2								
\$100,000-\$249,999.....	2	468,882	111	87	23	1	.....	68,435	49,502
\$250,000-\$499,999.....	3								
\$500,000-\$999,999.....	1	1,462,500	407	378	28	1	.....	439,234	81,123
Operating and maintaining wells, total.....	8	411,427	174	158	11	5	2	201,378	68,805
\$1-\$19,999.....	6								
\$20,000-\$49,999.....	1	411,427	174	158	11	5	2	201,378	68,805
\$250,000-\$499,999.....	1								
Oil- and gas-field machine-shop and repair work, total..	97	5,833,144	1,461	1,162	207	102	57	1,723,456	583,343
\$1-\$19,999.....	49	407,403	202	129	20	53	40	121,202	24,061
\$20,000-\$49,999.....	29	866,720	289	185	44	40	13	269,218	79,703
\$50,000-\$99,999.....	9	633,493	194	164	24	6	4	206,524	54,115
\$100,000-\$249,999.....	5	828,127	214	196	13	3	.....	317,794	49,879
\$250,000-\$499,999.....	2								
\$500,000-\$999,999.....	2								
\$1,000,000-\$2,499,999.....	1	3,097,401	582	476	106	.....	.....	808,720	375,585
General well servicing, total.....	83	4,864,982	1,896	1,695	111	90	24	1,792,342	281,516
\$1-\$19,999.....	29	295,119	170	131	7	32	16	104,913	3,875
\$20,000-\$49,999.....	26	897,967	462	407	24	31	7	369,375	34,607
\$50,000-\$99,999.....	13	1,271,941	478	419	41	16	1	394,631	84,051
\$100,000-\$249,999.....	7	1,099,930	313	282	27	4	.....	434,831	90,534
\$250,000-\$499,999.....	2								
\$500,000-\$999,999.....	1	1,310,005	475	456	12	7	.....	488,592	48,649

<sup>1</sup> For definition of contract services covered see table 22, footnote 1. Each report was classified by major type of work performed and by amount received or due for services performed during the year.

## OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS

183

TABLE 28.—SELECTED STATISTICS FOR CONCERNS ENGAGED IN OIL- AND GAS-FIELD CONTRACT WORK IN THE UNITED STATES, CLASSIFIED BY NUMBER OF WAGE EARNERS AND BY STATE: 1939<sup>1</sup>

STATE AND NUMBER OF WAGE EARNERS	Number of contracting concerns	Amount received or due for services performed	NUMBER OF PERSONS ENGAGED					Wages	Salaries
			Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
						Total	Per-forming manual labor		
United States, total.....	1,688	\$203,843,917	46,939	40,061	5,153	1,725	637	\$56,419,177	\$14,869,896
None.....	62	872,598	255	.....	182	73	68	.....	278,232
1-5.....	570	6,870,476	2,428	1,686	220	540	280	1,884,192	349,282
6-20.....	655	30,421,117	8,784	7,311	814	639	188	9,163,612	1,625,361
21-50.....	287	39,893,940	10,283	8,982	1,063	258	39	11,804,180	3,008,865
51-100.....	104	41,203,143	8,314	7,415	838	63	5	11,085,399	3,020,482
101-250.....	46	37,948,621	7,955	6,982	945	28	.....	10,495,237	3,104,654
251-500.....	15	40,507,855	7,527	6,510	1,013	4	.....	10,302,567	3,318,697
501-1,000.....	2								
Unclassified.....	147	6,128,167	1,415	1,215	80	120	59	1,683,990	264,322
Arkansas, total.....	19	5,980,503	1,155	1,079	64	12	.....	1,514,629	243,602
None.....	1	374,443	101	89	6	6	.....	139,172	24,940
1-5.....	5								
6-20.....	1	2,906,433	488	451	38	1	.....	691,436	162,942
21-50.....	1								
51-100.....	6	2,304,545	534	509	22	3	.....	623,489	55,720
101-250.....	3								
Unclassified.....	3	395,082	32	30	.....	2	.....	80,532	.....
California, total.....	149	18,896,959	4,214	3,539	558	117	58	5,915,787	1,829,568
None.....	10	154,135	35	.....	28	7	7	.....	65,052
1-5.....	54	663,390	217	141	23	48	36	194,733	39,586
6-20.....	50	2,556,588	653	505	102	46	12	783,405	165,668
21-50.....	13	2,456,236	519	435	73	11	2	786,930	234,553
51-100.....	7	3,188,889	584	477	106	1	.....	892,171	342,517
101-250.....	6	4,433,975	1,034	908	128	.....	.....	1,489,639	550,851
251-500.....	3	5,362,017	1,143	1,051	92	.....	.....	1,761,344	427,883
Unclassified.....	6	81,729	29	22	3	4	1	27,545	3,680
Colorado, total.....	5	112,268	13	8	.....	5	4	21,585	.....
None.....	2	112,268	13	8	.....	5	4	21,585	.....
1-5.....	3								
Illinois, total.....	168	25,324,394	5,464	4,776	504	184	61	7,100,358	1,325,611
None.....	5	188,443	40	.....	34	6	4	.....	57,746
1-5.....	37	494,197	165	115	11	39	17	133,304	9,993
6-20.....	69	3,292,422	889	755	50	84	25	1,015,340	70,460
21-50.....	27	3,754,828	902	800	66	38	9	979,175	157,138
51-100.....	8	3,105,066	799	616	176	7	.....	902,196	377,992
101-250.....	5	2,794,390	929	881	47	1	.....	988,358	133,622
251-500.....	4	11,059,008	1,606	1,491	115	.....	.....	2,935,153	486,181
Unclassified.....	13	835,042	134	118	5	11	6	166,832	32,459
Indiana, total.....	20	722,953	158	120	11	27	12	128,641	23,019
None.....	2	167,515	63	38	5	20	9	40,535	2,875
1-5.....	14								
6-20.....	3	555,438	95	82	6	7	3	88,106	20,144
21-50.....	1								
Kansas, total.....	164	11,891,303	2,979	2,645	186	148	53	3,535,971	636,168
None.....	7	63,815	19	.....	6	13	11	.....	10,930
1-5.....	51	591,558	215	154	14	47	20	176,089	21,997
6-20.....	61	2,857,613	846	723	67	56	13	889,407	133,083
21-50.....	21	3,115,546	806	735	80	11	1	1,038,338	176,892
51-100.....	8	4,874,005	943	901	35	7	.....	1,310,687	289,721
101-250.....	2								
Unclassified.....	14	388,766	150	132	4	14	8	121,450	3,745
Kentucky, total.....	19	503,900	176	138	12	26	11	131,264	17,542
None.....	5	55,565	23	15	3	5	3	16,968	5,060
1-5.....	8	421,814	145	118	9	18	6	107,134	12,482
6-20.....	2								
21-50.....	4	26,521	8	5	.....	3	2	7,162	.....
Unclassified.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Louisiana, total.....	90	13,480,357	3,193	2,859	265	69	11	3,809,127	738,355
None.....	2	314,091	95	58	17	20	7	72,176	32,656
1-5.....	20	.....	.....	.....	.....	.....	.....	.....	.....
6-20.....	29	2,103,773	492	392	75	25	2	476,938	118,432
21-50.....	15	2,522,592	552	481	61	10	1	556,434	173,009
51-100.....	13	4,197,763	1,016	953	59	6	.....	1,399,701	166,581
101-250.....	4	4,010,129	908	855	47	6	.....	1,148,646	220,002
251-500.....	1								
Unclassified.....	6	332,009	128	120	6	2	1	155,232	25,475
Michigan, total.....	65	4,883,752	953	701	207	45	21	986,963	503,829
None.....	29	416,867	113	79	13	21	12	106,569	13,564
1-5.....	19	691,519	251	216	22	13	4	273,863	43,497
6-20.....	6	3,684,328	542	367	171	4	1	564,875	446,288
21-50.....	2								
101-250.....	2	91,038	47	39	1	7	4	41,656	500
Unclassified.....	9								

<sup>1</sup>For definition of contract services covered see table 22, footnote 1. Except as noted, each report was classified by average number of wage earners employed during the year; reports on which number of wage earners, by month, was not reported, are included in "Unclassified."

TABLE 27.—SELECTED STATISTICS FOR CONCERNS ENGAGED IN OIL- AND GAS-FIELD CONTRACT WORK IN THE UNITED STATES, CLASSIFIED BY AMOUNT RECEIVED OR DUE FOR SERVICES AND BY MAJOR TYPE OF WORK: 1939<sup>1</sup>—Continued

TYPE OF WORK AND AMOUNT RECEIVED OR DUE FOR SERVICES PERFORMED	Number of con- tracting concerns	Amount received or due for services performed	NUMBER OF PERSONS ENGAGED					Wages	Salaries
			Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
						Total	Perform- ing manual labor		
Acidizing and other chemical treatment, total.....	10	\$3,285,312	374	202	167	5	3	\$247,115	\$463,638
\$1-\$19,999.....	3	81,865	17	6	8	3	3	6,729	13,997
\$20,000-\$49,999.....	2								
\$50,000-\$99,999.....	3								
\$500,000-\$999,999.....	1	3,203,447	357	196	159	2	.....	238,386	449,641
\$1,000,000-\$2,499,999.....	1								
Cleaning out, bailing, and swabbing wells, total.....	37	1,586,048	618	533	55	30	5	643,011	92,526
\$1-\$19,999.....	18	159,658	81	57	9	15	3	60,039	9,345
\$20,000-\$49,999.....	11	377,454	156	137	8	11	2	152,140	9,989
\$50,000-\$99,999.....	6								
\$100,000-\$249,999.....	1	1,048,938	381	339	38	4	.....	430,832	73,192
\$250,000-\$499,999.....	1								
Drilling water wells, total.....	22	404,076	162	125	12	25	11	120,369	22,310
\$1-\$19,999.....	17	172,259	81	56	9	16	6	53,429	15,010
\$20,000-\$49,999.....	4								
\$50,000-\$99,999.....	1	231,817	81	69	3	9	5	66,940	7,300
Installation of production equipment (such as well- head fittings, pumps, and engines), total.....	12	327,297	156	142	4	10	1	118,328	6,060
\$1-\$19,999.....	5	47,161	36	31	.....	5	1	22,304	.....
\$20,000-\$49,999.....	4	94,226	53	46	4	3	.....	39,778	6,060
\$50,000-\$99,999.....	3	185,910	67	65	.....	2	.....	56,246	.....
Erecting, cleaning, repairing, and dismantling lease tanks, total.....	33	2,415,007	707	614	67	26	13	648,189	150,259
\$1-\$19,999.....	14	119,809	67	48	4	15	10	33,454	6,364
\$20,000-\$49,999.....	11	363,816	122	101	12	9	3	107,066	13,270
\$50,000-\$99,999.....	2								
\$100,000-\$249,999.....	2	468,882	111	87	23	1	.....	68,435	49,502
\$250,000-\$499,999.....	3								
\$500,000-\$999,999.....	1	1,462,500	407	378	28	1	.....	439,234	81,123
Operating and maintaining wells, total.....	6	411,427	174	158	11	5	2	201,378	68,805
\$1-\$19,999.....	6								
\$20,000-\$49,999.....	1	411,427	174	158	11	5	2	201,378	68,805
\$250,000-\$499,999.....	1								
Oil- and gas-field machine-shop and repair work, total..	97	5,833,144	1,461	1,152	207	102	57	1,723,456	583,343
\$1-\$19,999.....	49	407,403	202	129	20	53	40	121,202	24,061
\$20,000-\$49,999.....	29	868,720	269	185	44	40	13	289,216	79,703
\$50,000-\$99,999.....	9	833,493	194	164	24	6	4	206,524	54,115
\$100,000-\$249,999.....	5	828,127	214	198	13	3	.....	317,794	49,879
\$250,000-\$499,999.....	2								
\$500,000-\$999,999.....	2	3,097,401	582	476	106	.....	.....	808,720	375,585
\$1,000,000-\$2,499,999.....	1								
General well servicing, total.....	83	4,864,982	1,896	1,695	111	90	24	1,792,342	281,516
\$1-\$19,999.....	29	295,119	170	131	7	32	16	104,913	3,875
\$20,000-\$49,999.....	26	887,987	462	407	24	31	7	369,375	34,807
\$50,000-\$99,999.....	18	1,271,941	476	419	41	16	1	394,631	84,051
\$100,000-\$249,999.....	7	1,099,930	313	282	27	4	.....	434,831	90,534
\$250,000-\$499,999.....	2								
\$500,000-\$999,999.....	1	1,310,005	475	456	12	7	.....	488,562	48,649

<sup>1</sup>For definition of contract services covered see table 22, footnote 1. Each report was classified by major type of work performed and by amount received or due for services performed during the year.

## OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS

183

TABLE 28.—SELECTED STATISTICS FOR CONCERNS ENGAGED IN OIL- AND GAS-FIELD CONTRACT WORK IN THE UNITED STATES, CLASSIFIED BY NUMBER OF WAGE EARNERS AND BY STATE: 1939<sup>1</sup>

STATE AND NUMBER OF WAGE EARNERS	Number of contracting concerns	Amount received or due for services performed	NUMBER OF PERSONS ENGAGED					Wages	Salaries
			Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
						Total	Per-forming manual labor		
United States, total.....	1,888	\$203,843,917	46,939	40,061	5,153	1,725	637	\$58,419,177	\$14,869,896
None.....	62	872,598	255	.....	182	73	68	.....	278,232
1-5.....	570	6,870,476	2,426	1,666	220	540	280	1,864,192	349,283
6-20.....	655	30,421,117	8,764	7,311	814	639	186	9,163,612	1,525,361
21-50.....	287	39,893,940	10,283	8,962	1,063	258	39	11,804,180	3,008,865
51-100.....	104	41,203,143	8,314	7,415	836	63	5	11,085,399	3,020,482
101-250.....	46	37,946,621	7,955	6,982	945	28	.....	10,495,237	3,104,654
251-500.....	15	40,507,855	7,527	6,510	1,013	4	.....	10,302,567	3,318,697
501-1,000.....	2								
Unclassified.....	147	6,128,167	1,415	1,215	80	120	59	1,683,990	284,322
Arkansas, total.....	19	5,980,503	1,155	1,079	64	12	.....	1,514,620	243,602
1-5.....	1	374,443	101	89	6	6	.....	139,172	24,940
6-20.....	5								
21-50.....	1								
51-100.....	6								
101-250.....	3	2,906,433	488	451	36	1	.....	691,436	162,942
Unclassified.....	3	2,304,545	534	509	22	3	.....	623,489	55,720
		395,082	32	30	.....	2	.....	60,532	.....
California, total.....	149	18,896,959	4,214	3,539	558	117	58	5,915,787	1,829,568
None.....	10	154,135	35	.....	28	7	7	.....	65,052
1-5.....	54	663,390	217	141	28	48	36	194,733	39,586
6-20.....	50	2,558,588	653	505	102	46	12	783,405	165,666
21-50.....	13	2,456,236	519	435	73	11	2	786,930	234,553
51-100.....	7	3,188,889	564	477	106	1	.....	892,171	342,517
101-250.....	6	4,433,975	1,034	908	126	.....	.....	1,469,639	550,651
251-500.....	3	5,362,017	1,143	1,051	92	.....	.....	1,761,344	427,663
Unclassified.....	6	81,729	29	22	3	4	1	27,545	3,680
Colorado, total.....	5	112,268	13	8	.....	5	4	21,585	.....
None.....	2	112,268	13	8	.....	5	4	21,585	.....
1-5.....	3								
Illinois, total.....	168	25,324,394	5,464	4,776	504	184	61	7,100,358	1,325,611
None.....	5	188,443	40	.....	34	6	4	.....	57,746
1-5.....	37	494,197	165	115	11	39	17	133,304	9,993
6-20.....	69	3,292,422	889	755	50	84	25	1,015,340	70,480
21-50.....	27	3,754,828	902	800	66	36	9	979,175	157,138
51-100.....	8	3,106,066	799	618	176	7	.....	802,198	377,992
101-250.....	5	2,794,390	929	881	47	1	.....	988,358	133,622
251-500.....	4	11,059,008	1,606	1,491	115	.....	.....	2,935,153	486,181
Unclassified.....	13	635,042	134	118	5	11	6	166,832	32,459
Indiana, total.....	20	722,953	158	120	11	27	12	128,641	23,019
None.....	2	167,515	63	38	5	20	9	40,535	2,875
1-5.....	14								
6-20.....	3								
21-50.....	1								
		555,438	95	82	6	7	3	88,106	20,144
Kansas, total.....	164	11,891,303	2,979	2,645	186	148	53	3,535,971	636,168
None.....	7	63,815	19	.....	6	13	11	.....	10,930
1-5.....	51	591,558	215	154	14	47	20	176,089	21,997
6-20.....	61	2,857,613	846	723	67	56	13	869,407	133,083
21-50.....	21	3,115,546	806	735	60	11	1	1,036,336	176,692
51-100.....	8	4,874,005	943	901	35	7	.....	1,310,687	289,721
101-250.....	2								
Unclassified.....	14	388,766	150	132	4	14	8	121,450	3,745
Kentucky, total.....	19	503,900	176	138	12	26	11	131,284	17,542
None.....	5	55,565	23	15	3	5	3	16,968	5,060
1-5.....	8	421,814	145	118	9	18	6	107,134	12,482
6-20.....	2								
21-50.....	4	26,521	8	5	.....	3	2	7,182	.....
Unclassified.....	90	13,480,357	3,193	2,859	265	69	11	3,809,127	736,355
Louisiana, total.....	90	13,480,357	3,193	2,859	265	69	11	3,809,127	736,355
None.....	2	314,091	95	58	17	20	7	72,176	32,856
1-5.....	20	2,103,773	492	392	75	25	2	476,938	118,432
6-20.....	29								
21-50.....	15	2,522,532	552	481	61	10	1	556,434	173,009
51-100.....	13	4,197,763	1,016	953	59	6	.....	1,399,701	166,581
101-250.....	4	4,010,129	908	855	47	6	.....	1,148,646	220,002
251-500.....	1	332,009	128	120	6	2	1	155,232	25,475
Unclassified.....	6								
Michigan, total.....	65	4,883,752	953	701	207	45	21	986,963	503,829
None.....	29	416,887	113	79	13	21	12	106,569	13,564
1-5.....	19	691,519	251	216	22	13	4	273,863	43,497
6-20.....	6	3,684,328	542	367	171	4	1	564,975	446,288
21-50.....	2								
101-250.....	2	91,038	47	39	1	7	4	41,656	500
Unclassified.....	9								

<sup>1</sup>For definition of contract services covered see table 22, footnote 1. Except as noted, each report was classified by average number of wage earners employed during the year; reports on which number of wage earners, by month, was not reported, are included in "Unclassified."

MINERAL INDUSTRIES

TABLE 28.—SELECTED STATISTICS FOR CONCERNS ENGAGED IN OIL- AND GAS-FIELD CONTRACT WORK IN THE UNITED STATES, CLASSIFIED BY NUMBER OF WAGE EARNERS AND BY STATE: 1939<sup>1</sup>—Continued

STATE AND NUMBER OF WAGE EARNERS	Number of contracting concerns	Amount received or due for services performed	NUMBER OF PERSONS ENGAGED					Wages	Salaries
			Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
						Total	Performing manual labor		
Montana, total.....	20	\$482,205	133	105	11	17	8	\$142,829	\$19,207
None.....	1								
1-5.....	10	161,247	33	25	1	7	3	38,361	2,160
6-20.....	9	320,958	100	80	10	10	5	104,468	17,047
New Mexico, total.....	32	3,813,028	925	827	63	35	8	1,159,935	155,247
1-5.....	10	134,181	46	27	6	13	3	35,883	7,323
6-20.....	11	554,184	158	128	16	14	5	183,903	31,009
21-50.....	6	886,603	204	185	14	5	.....	313,028	87,650
51-100.....	3								
101-250.....	2	2,238,058	517	487	27	3	.....	627,121	49,365
New York, total.....	33	836,534	244	203	12	29	18	272,159	27,334
None.....	1								
1-5.....	19	221,247	78	60	3	15	12	69,213	5,283
6-20.....	7								
21-50.....	2	534,860	150	131	8	11	4	187,586	15,711
Unclassified.....	4	82,427	16	12	1	3	2	15,360	6,360
Ohio, total.....	39	636,159	284	232	19	33	17	266,751	26,410
None.....	1								
1-5.....	22	171,324	85	62	6	17	14	55,389	5,642
6-20.....	9								
21-50.....	2	434,490	183	159	13	11	1	194,186	20,768
Unclassified.....	5	30,345	16	11	.....	5	2	17,176	.....
Oklahoma, total.....	204	13,211,972	3,734	3,220	334	180	80	3,831,582	860,404
None.....	8	30,913	19	.....	7	12	12	.....	5,459
1-5.....	56	638,722	243	166	18	59	32	156,297	36,380
6-20.....	83	3,247,261	1,092	930	101	61	26	939,591	228,406
21-50.....	38	4,235,560	1,235	1,117	87	31	4	1,232,492	237,655
51-100.....	6	1,649,557	444	390	51	3	1	493,769	131,331
101-250.....	4	3,287,079	656	581	68	7	.....	969,411	217,603
Unclassified.....	9	122,880	45	38	2	7	5	40,022	3,590
Pennsylvania, total.....	140	3,180,242	1,247	1,011	62	174	92	1,250,281	121,399
None.....	5	118,425	41	.....	35	6	6	.....	39,932
1-5.....	65	525,927	263	182	4	77	54	210,945	5,654
6-20.....	44	1,327,308	492	421	12	59	20	540,381	41,843
21-50.....	11	960,919	342	316	11	15	4	404,164	34,170
Unclassified.....	15	247,665	109	92	.....	17	8	94,791	.....
Texas, total.....	658	94,849,037	20,966	17,602	2,801	563	158	24,929,574	8,092,296
None.....	16	256,897	87	.....	72	15	14	.....	99,113
1-5.....	146	1,964,579	655	447	82	126	53	457,691	143,247
6-20.....	237	11,295,518	3,227	2,682	325	220	61	3,288,663	620,672
21-50.....	134	19,691,616	5,001	4,231	650	120	14	5,667,828	1,794,790
51-100.....	52	22,400,754	4,053	3,660	359	34	4	5,672,810	1,552,283
101-250.....	13	16,147,092	3,231	2,745	471	15	.....	4,380,567	1,487,998
251-500.....	6	19,588,028	4,073	3,287	786	.....	.....	4,581,929	2,202,392
501-1,000.....	2								
Unclassified.....	47	3,504,553	639	550	58	33	12	880,096	186,801
West Virginia, total.....	39	1,409,016	497	444	15	38	16	517,824	41,723
1-5.....	17	171,283	72	51	5	16	8	56,518	9,143
6-20.....	7	491,207	107	99	2	6	2	172,746	2,100
21-50.....	5	608,379	265	253	6	6	.....	238,609	28,768
51-100.....	1								
Unclassified.....	9	138,149	53	41	2	10	6	49,951	1,712
Wyoming, total.....	18	3,433,844	556	516	24	16	8	843,330	193,879
None.....	1								
1-5.....	7	49,123	31	18	2	11	6	16,495	440
6-20.....	3	106,635	40	35	4	1	.....	31,696	4,634
21-50.....	3								
251-500.....	1	3,226,125	476	456	18	2	.....	788,954	188,805
Unclassified.....	3	51,961	9	7	.....	2	2	6,185	.....
Mississippi, Missouri, and Nebraska, total.....	6	193,491	48	36	5	7	1	60,607	16,303
None.....	1								
1-5.....	4								
6-20.....	1	193,491	48	36	5	7	1	60,607	16,303

<sup>1</sup>For definition of contract services covered see table 22, footnote 1. Except as noted, each report was classified by average number of wage earners employed during the year: reports on which number of wage earners, by month, was not reported, are included in "Unclassified."

TABLE 29.—SELECTED STATISTICS FOR CONCERNS ENGAGED IN OIL- AND GAS-FIELD CONTRACT WORK IN THE UNITED STATES, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK AND BY MAJOR TYPE OF WORK: 1939<sup>1</sup>

TYPE OF WORK AND HOURS PER WEEK	Number of contracting concerns	Amount received or due for services performed	NUMBER OF PERSONS ENGAGED						Wages	Salaries
			Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members				
						Total	Performing manual labor			
All types of work, total.....	1,888	\$203,843,917	46,939	40,061	5,153	1,725	637	\$56,419,177	\$14,869,896	
1-34.....	35	2,222,410	725	625	61	39	10	676,278	111,471	
35.....	18	2,578,877	633	581	34	18	5	664,477	88,420	
36-39.....	11	1,390,314	387	330	30	7	3	450,498	113,198	
40.....	257	20,634,308	5,995	4,729	987	279	121	6,574,110	2,187,279	
41-42.....	328	68,987,702	14,489	12,664	1,547	278	49	19,181,864	5,251,776	
43-44.....	165	33,727,485	7,878	6,780	966	132	41	9,336,448	3,048,983	
45-47.....	5	288,075	110	98	6	6	2	129,549	7,976	
48.....	110	4,963,428	1,377	1,139	127	111	47	1,556,810	303,021	
49-53.....	13	1,174,121	286	242	34	10	5	354,549	69,923	
54-59.....	128	25,366,981	4,732	4,240	374	118	20	6,989,224	1,199,727	
60 and over.....	22	1,287,147	387	323	30	14	3	328,525	71,365	
Unclassified.....	796	41,205,069	9,980	8,310	957	713	331	10,176,845	2,436,757	
Exploration and well-surveying work, total.....	78	17,670,423	4,317	2,604	1,687	46	18	3,688,106	4,604,627	
40.....	15	2,144,524	890	483	398	9	4	683,688	676,882	
41-42.....	16	7,728,508	1,504	876	620	8	.....	1,236,302	1,909,128	
43-44.....	11	3,911,244	903	590	310	3	2	802,930	935,297	
45-47.....	1	398,961	93	49	39	5	.....	71,697	87,604	
48.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
54-59.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
Unclassified.....	31	3,487,188	927	606	300	21	12	793,289	795,716	
Hauling oil- and gas-field supplies and equipment, total.....	172	10,471,871	4,290	3,750	343	197	73	3,173,125	591,323	
1-34.....	5	314,692	78	66	7	5	1	67,980	8,720	
35.....	5	237,243	80	72	4	4	1	64,455	7,500	
36-39.....	3	28,435	25	18	2	5	3	12,494	3,000	
40.....	22	1,516,168	508	421	58	29	13	390,325	98,289	
41-42.....	8	1,574,909	736	683	42	11	2	554,298	103,016	
43-44.....	7	1,111,028	562	504	46	12	3	357,117	93,444	
45-47.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
48.....	9	844,981	291	254	27	10	2	280,263	31,561	
49-53.....	8	933,475	224	191	27	6	3	238,328	42,298	
54-59.....	4	482,882	186	163	18	5	.....	140,435	31,950	
60 and over.....	10	656,501	211	184	21	6	.....	139,951	40,507	
Unclassified.....	89	2,771,589	1,389	1,194	91	104	45	917,479	133,058	
Excavating slush pits and cellars, grading, and building foundations at well locations, total.....	73	1,851,616	925	806	32	87	32	625,768	50,599	
1-34.....	2	124,374	72	64	3	5	1	47,286	7,555	
35.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
40.....	6	118,127	48	38	5	5	2	23,683	4,380	
41-42.....	8	248,960	125	104	8	13	4	70,202	9,599	
43-44.....	6	233,462	135	124	2	9	1	107,796	5,870	
45-47.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
48.....	3	78,319	39	35	.....	4	3	29,331	.....	
49-53.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
54-59.....	1	107,047	54	48	2	4	.....	31,184	1,943	
60 and over.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
Unclassified.....	43	941,327	452	393	12	47	21	316,074	21,252	
Building, repairing, and dismantling rigs and derricks, total.....	115	9,155,432	3,847	3,478	258	111	44	3,724,596	568,067	
1-34.....	5	305,333	139	125	9	5	2	123,335	20,400	
35.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
36-39.....	22	1,538,855	602	510	72	20	7	607,296	103,043	
40.....	10	2,104,987	730	678	43	9	1	892,384	144,319	
41-42.....	14	2,752,266	1,013	923	77	13	4	1,059,249	202,008	
43-44.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
45-47.....	61	2,453,991	1,363	1,242	57	64	30	1,042,332	98,297	
Unclassified.....	61	2,453,991	1,363	1,242	57	64	30	1,042,332	98,297	
Drilling oil, gas, and dry wells, total.....	985	128,107,076	25,068	22,548	1,676	862	292	36,020,059	5,917,481	
1-34.....	5	965,637	221	199	12	10	3	298,046	34,578	
35.....	8	2,511,723	510	473	28	9	1	565,658	58,760	
36-39.....	5	1,142,753	261	240	19	2	.....	352,285	86,519	
40.....	129	10,862,435	2,744	2,389	200	155	70	3,629,336	505,443	
41-42.....	221	52,055,072	9,774	8,908	687	179	25	14,840,597	2,652,655	
43-44.....	83	20,421,196	4,183	3,811	305	87	22	5,897,355	1,185,176	
45-47.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
48.....	71	2,919,035	780	652	57	71	29	951,980	159,198	
49-53.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
54-59.....	107	23,987,521	4,200	3,794	308	98	18	6,539,144	1,071,888	
60 and over.....	10	563,048	129	115	8	6	3	174,092	29,670	
Unclassified.....	344	12,978,656	2,284	1,967	52	265	123	2,971,566	133,394	
Running, cutting, and pulling casing, tubes, and rods, total.....	96	1,753,089	1,025	865	56	104	41	756,532	99,804	
1-34.....	4	83,799	57	52	1	4	2	43,700	3,679	
35.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
36-39.....	9	175,209	85	70	3	12	5	63,143	4,280	
40.....	13	232,795	179	148	19	12	3	120,640	42,575	
41-42.....	7	137,187	67	55	6	6	2	57,044	6,879	
43-44.....	8	.....	.....	.....	.....	.....	.....	.....	.....	
45-47.....	1	139,175	63	49	3	11	6	51,135	3,720	
48.....	55	934,944	574	491	24	59	23	420,870	38,871	
Unclassified.....	55	934,944	574	491	24	59	23	420,870	38,871	
Cementing wells, total.....	23	9,366,442	1,051	838	202	11	9	1,759,600	594,731	
1-34.....	2	208,584	51	34	14	3	2	45,308	21,598	
35.....	5	.....	.....	.....	.....	.....	.....	.....	.....	
36-39.....	1	.....	.....	.....	.....	.....	.....	.....	.....	
40.....	1	987,334	150	114	34	2	2	239,763	103,757	
41-42.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
43-44.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
45-47.....	2	.....	.....	.....	.....	.....	.....	.....	.....	
Unclassified.....	11	8,170,524	850	690	154	6	5	1,474,529	469,376	

<sup>1</sup>For definition of contract services covered see table 22, footnote 1. Each report was classified by major type of work performed and by number of hours in the full-time workweek reported for that group of wage earners for whom the largest number of man-hours worked during the year was reported; reports on which number of hours was not reported and reports on which no wage earners were reported are included in "Unclassified."



TABLE 29.—SELECTED STATISTICS FOR CONCERNS ENGAGED IN OIL- AND GAS-FIELD CONTRACT WORK IN THE UNITED STATES, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK AND BY MAJOR TYPE OF WORK: 1939<sup>1</sup>—Continued

TYPE OF WORK AND HOURS PER WEEK	Number of contracting concerns	Amount received or due for services performed	NUMBER OF PERSONS ENGAGED					Wages	Salaries
			Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
						Total	Performing manual labor		
Shooting wells, total.....	34	3,563,538	351	257	81	13	11	486,180	324,281
1-34.....	1	499,809	58	42	11	3	3	75,287	71,010
40.....	5								
43-44.....	2								
Unclassified.....	26	3,063,729	295	215	70	10	8	410,893	253,251
Perforating well casing, total.....	10	2,777,137	499	294	204	1	1	681,033	470,546
40.....	2	2,433,446	456	255	201	.....	.....	589,125	460,246
41-42.....	2								
43-44.....	2								
45-53.....	1	250,451	22	20	2	.....	.....	58,813	5,300
Unclassified.....	3								
Acidizing and other chemical treatment of wells, total.....	10	3,285,312	374	202	167	5	3	247,115	463,636
40.....	4	136,454	22	13	8	1	1	14,591	20,400
41-42.....	2								
43-44.....	1		337	180	155	2	.....	223,656	438,225
Unclassified.....	3	74,419	15	9	4	2	2	8,668	5,013
Cleaning out, bailing, and swabbing wells, total.....	37	1,586,048	618	533	55	30	5	643,011	92,528
40.....	5	87,741	34	28	1	5	1	30,288	2,177
41-42.....	5								
43-44.....	5		97	84	8	5	.....	98,256	20,707
45-48.....	2	469,351	162	144	12	6	.....	180,939	15,960
54-59.....	5								
Unclassified.....	15		191,224	75	69	3	3	2	90,798
		809,846	250	208	31	11	2	244,750	49,682
Drilling water wells, total.....	22	404,076	182	125	12	25	11	120,369	22,310
35.....	1	92,208	34	26	4	4	1	34,788	7,880
40.....	4								
41-42.....	2								
43-44.....	2	116,538	58	48	5	5	2	33,988	13,585
45-48.....	3								
Unclassified.....	10		23,962	13	9	1	3	1	6,115
		171,368	57	42	2	13	7	45,498	975
Installation of production equipment (such as wellhead fittings, pumps, and engines), total.....	12	327,297	156	142	4	10	1	118,328	6,060
40.....	2	142,969	72	64	4	4	.....	45,133	6,060
41-42.....	3								
43-44.....	1								
Unclassified.....	6	184,328	84	78	.....	6	1	73,195	.....
Erecting, cleaning, repairing, and dismantling lease tanks, total.....	33	2,415,007	707	614	67	26	13	648,189	150,259
1-34.....	3	276,637	60	39	17	4	1	35,267	32,502
35.....	1								
40.....	3		112,659	41	33	7	1	1	40,288
41-42.....	3	50,007	23	18	3	2	1	18,085	5,284
43-44.....	2								
45-48.....	2								
Unclassified.....	18	1,000,535	377	350	25	2	1	400,311	72,243
		975,169	206	174	15	17	9	154,138	34,780
Operating and maintaining wells, total.....	8	411,427	174	158	11	5	2	201,378	68,805
43-44.....	1	411,427	174	158	11	5	2	201,378	68,805
54-59.....	1								
Unclassified.....	6								
Oil- and gas-field machine-shop and repair work, total.....	97	5,833,144	1,461	1,152	207	102	57	1,723,456	583,343
1-34.....	3	67,589	20	14	1	5	3	20,376	1,800
35.....	1								
40.....	14		495,719	185	157	16	12	5	187,377
41-42.....	17	2,136,612	526	443	65	18	8	685,222	184,090
43-44.....	12								
45-47.....	1		510,433	121	92	18	11	5	157,894
48.....	6	178,644	56	36	11	9	6	53,547	26,381
49-53.....	1								
54-59.....	1								
60 and over.....	1	45,239	11	8	.....	3	1	10,950	.....
Unclassified.....	40								
General well surveying, total.....	83	4,864,982	1,896	1,695	111	90	24	1,792,342	261,516
1-34.....	5	364,263	178	162	11	5	.....	139,091	17,466
35.....	1								
36-39.....	1								
40.....	10	641,313	301	271	10	20	6	239,493	15,638
41-42.....	17								
43-44.....	6		1,326,113	581	523	10	1	531,165	73,527
45.....	6	308,426	107	93	6	8	2	86,799	10,836
48.....	2								
49-53.....	2		248,390	64	49	10	5	4	109,791
54-59.....	3	122,962	39	34	1	4	.....	49,884	620
Unclassified.....	35								

<sup>1</sup> For definition of contract services covered see table 22, footnote 1. Each report was classified by major type of work performed and by number of hours in the full-time workweek reported for that group of wage earners for whom the largest number of man-hours worked during the year was reported; reports on which number of hours was not reported and reports on which no wage earners were reported are included in "Unclassified."

## OIL AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS

187

TABLE 30.—SELECTED STATISTICS FOR CONCERNS ENGAGED IN OIL- AND GAS-FIELD CONTRACT WORK IN THE UNITED STATES, CLASSIFIED BY NUMBER OF DAYS ACTIVE DURING THE YEAR: 1939<sup>1</sup>

UNITED STATES, CLASSIFIED BY NUMBER OF DAYS ACTIVE

DAYS ACTIVE	Number of contracting concerns	Amount received or due for services performed	NUMBER OF PERSONS ENGAGED					Wages	Salaries
			Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members			
						Total	Performing manual labor		
Total.....	1,888	\$203,843,917	46,939	40,061	5,153	1,725	637	\$56,419,177	\$14,869,896
1-49.....	43	387,003	156	108	16	34	12	97,804	31,558
50-99.....	100	1,253,252	477	338	28	113	60	353,369	27,323
100-149.....	129	3,692,084	1,219	1,000	91	128	61	1,038,899	171,778
150-199.....	163	5,664,994	1,852	1,548	147	159	62	1,709,538	258,860
200-249.....	100	4,553,348	1,382	1,137	144	101	41	1,377,308	223,114
250-299.....	66	3,875,979	1,138	992	64	82	34	1,157,929	137,972
300-349.....	88	5,308,570	1,810	1,364	165	81	24	1,611,659	480,783
350-399.....	63	8,904,599	1,531	1,249	210	72	27	1,929,281	591,814
400-449.....	144	15,558,817	4,378	3,568	664	146	42	4,620,282	1,491,660
450-499.....	304	118,210,178	22,743	19,766	2,735	242	56	30,899,270	8,950,910
500-549.....	690	40,679,123	10,453	8,997	889	567	218	11,623,658	2,504,124
Unclassified.....									

For definition of contract services covered see table 22, footnote 1. Each report was classified by reported number of days active during the year; reports on which number of days active was not reported are included in "Unclassified."

## MINERAL INDUSTRIES

TABLE 31.—PRINCIPAL STATISTICS FOR OIL- AND GAS-FIELD EXPLORATION AND WELL-SURVEYING WORK PERFORMED BY CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Illinois	Kansas	Louisiana	Oklahoma	Texas	Ark., Ind., Miss., Nebr., N.Mex., and Pa.
Number of contracting concerns.....	76	14	6	3	9	5	32	7
Number of persons engaged, total.....	4,317	918	282	24	231	31	2,736	95
Wage earners (average for the year, including inactive periods).....	2,804	718	130	13	148	16	1,537	42
Salaried employees.....	1,687	194	147	6	78	11	1,187	44
Proprietors and firm members (not applicable to corporations).....	46	6	5	5	5	4	12	9
Performing manual labor.....	18	3	2	2	1	3	4	3
Amount received or due for services performed.....	\$17,670,423	\$3,525,528	\$1,000,228	\$92,317	\$878,699	\$145,738	\$11,747,193	\$280,722
Wages and salaries paid.....	\$8,292,733	\$1,767,488	\$440,247	\$30,496	\$398,659	\$23,027	\$5,514,700	\$108,118
Wages.....	\$3,888,106	\$957,518	\$178,437	\$19,566	\$216,909	\$16,750	\$2,247,724	\$51,202
Salaries.....	\$4,404,627	\$809,969	\$261,810	\$10,930	\$181,750	\$16,277	\$3,266,976	\$56,916
Number of man-hours worked by wage earners.....	5,148,955	1,281,769	276,837	28,331	248,437	20,800	3,202,242	82,539
Average number of wage earners on active days, total....	2,665	720	138	13	154	15	1,592	53
Full-time workers.....	2,281	541	105	10	93	11	1,482	39
Part-time workers.....	404	179	33	3	61	4	110	14
Average number of days active.....	324	313	298	298	319	208	336	261
Average hourly earning of wage earners.....	\$0.72	\$0.74	\$0.84	\$0.74	\$0.87	\$0.81	\$0.70	\$0.62
Horsepower rating of power equipment.....	86,037	19,090	7,910	766	5,366	281	49,000	3,624
Per wage earner.....	33.0	28.6	60.8	58.9	36.3	17.8	31.9	86.3

<sup>1</sup>For definition of contract services covered see table 22, footnotes 1 and 2; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 24 were engaged in work in only 1 State; 12, in 2 States; 13, in 3 States; 8, in 4 States; 7, in 5 States; 2, in 6 States; 4, in 7 States; 2, in 10 States; 1, in 14 States; 2, in 15 States; and 1, in 22 States. In addition to the States in which concerns reported that they did the major portion of their work, concerns reported doing work in Alabama, Arizona, Colorado, Delaware, Florida, Georgia, Kentucky, Michigan, Missouri, Montana, New York, Ohio, South Dakota, Utah, and Wyoming.

TABLE 32.—PRINCIPAL STATISTICS FOR HAULING OIL- AND GAS-FIELD SUPPLIES AND EQUIPMENT BY CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Colorado	Illinois	Kansas	Louisiana	Michigan
Number of contracting concerns.....	172	8	3	28	20	10	4
Number of persons engaged, total.....	4,290	163	7	375	180	220	29
Wage earners (average for the year, including inactive periods).....	3,750	130	4	321	144	203	24
Salaried employees.....	343	22	.....	21	12	7	1
Proprietors and firm members (not applicable to corporations).....	197	11	3	33	24	10	4
Performing manual labor.....	73	1	2	16	10	1	2
Amount received or due for services performed.....	\$10,471,871	\$685,300	\$44,604	\$899,578	\$363,131	\$495,504	\$44,453
Wages and salaries paid.....	\$3,784,448	\$224,748	\$5,585	\$295,836	\$134,662	\$142,177	\$13,988
Wages.....	\$3,173,125	\$185,118	\$5,585	\$268,150	\$121,568	\$134,666	\$13,208
Salaries.....	\$591,323	\$39,630	.....	\$27,686	\$13,094	\$7,491	\$780
Number of man-hours worked by wage earners, total.....	6,535,088	212,719	10,372	513,967	235,763	321,941	31,976
Drilling wells and rig building.....	7,081	.....	.....	.....	.....	.....	.....
Doing other work.....	6,528,007	212,719	10,372	513,967	235,763	321,941	31,976
Average number of wage earners on active days, total.....	3,788	129	5	337	144	202	23
Full-time workers.....	2,375	83	4	172	110	111	8
Part-time workers.....	1,413	46	1	165	34	91	15
Average number of days active.....	318	340	276	327	273	309	268
Average hourly earning of wage earners.....	\$0.49	\$0.87	\$0.54	\$0.52	\$0.52	\$0.42	\$0.41
Horsepower rating of power equipment.....	150,066	8,645	555	14,398	10,270	7,875	1,312
Per wage earner.....	40.0	66.5	138.8	44.9	71.3	38.8	54.7

<sup>1</sup>For definition of contract services covered see table 22, footnotes 1 and 3; for explanations of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 108 were engaged in work in only 1 State; 33, in 2 States; 17, in 3 States; 6, in 4 States; 6, in 5 States; 1, in 7 States; and 1, in 8 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Mississippi, Missouri, Nebraska, Tennessee, and Utah.

TABLE 32.—PRINCIPAL STATISTICS FOR HAULING OIL- AND GAS-FIELD SUPPLIES AND EQUIPMENT BY CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>—Continued

ITEM	New Mexico	Oklahoma	Texas	Wyoming	Arkansas, Indiana, and Montana	Kentucky and West Virginia
Number of contracting concerns.....	6	22	58	6	4	3
Number of persons engaged, total.....	189	361	2,554	33	159	20
Wage earners (average for the year, including inactive periods).....	172	297	2,278	24	140	13
Salaried employees.....	9	41	213	3	11	3
Proprietors and firm members (not applicable to corporations).....	8	23	63	6	8	4
Performing manual labor.....	1	11	20	4	3	2
Amount received or due for services performed.....	\$283,680	\$1,084,580	\$5,992,631	\$115,645	\$417,448	\$45,337
Wages and salaries paid.....	\$142,489	\$354,513	\$2,276,288	\$17,203	\$139,650	\$15,329
Wages.....	\$129,139	\$295,315	\$1,882,720	\$14,763	\$112,316	\$10,557
Salaries.....	\$13,350	\$59,198	\$395,568	\$2,440	\$27,334	\$4,772
Number of man-hours worked by wage earners, total.....	208,954	557,134	4,130,716	28,073	259,273	24,200
Drilling wells and rig building.....	.....	.....	.....	.....	7,081	.....
Doing other work.....	208,954	557,134	4,130,716	28,073	252,192	24,200
Average number of wage earners on active days, total.....	177	296	2,295	25	139	16
Full-time workers.....	70	242	1,462	12	94	7
Part-time workers.....	107	54	833	13	45	9
Average number of days active.....	294	304	325	244	322	300
Average hourly earning of wage earners.....	\$0.62	\$0.53	\$0.46	\$0.53	\$0.43	\$0.44
Horsepower rating of power equipment.....	5,249	20,942	73,440	2,008	4,349	1,023
Per wage earner.....	30.5	70.5	32.2	83.7	31.1	78.7

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 3; for explanations of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 108 were engaged in work in only 1 State; 33, in 2 States; 17, in 3 States; 6, in 4 States; 6, in 5 States; 1, in 7 States; and 1, in 8 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Mississippi, Missouri, Nebraska, Tennessee, and Utah.

TABLE 33.—PRINCIPAL STATISTICS FOR EXCAVATING SLUSH PITS AND CELLARS, GRADING, AND BUILDING FOUNDATIONS AT WELL LOCATIONS BY OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Illinois	Kansas	Oklahoma	Texas	Colo. and La.	Mich. and N. Y.
Number of contracting concerns.....	73	7	6	18	10	28	3	3
Number of persons engaged, total.....	925	67	140	115	103	423	43	34
Wage earners (average for the year, including inactive periods).....	806	55	123	92	89	381	36	30
Salaried employees.....	32	3	9	5	1	11	3	.....
Proprietors and firm members (not applicable to corporations).....	87	9	8	18	13	31	4	4
Performing manual labor.....	32	4	1	10	5	8	1	3
Amount received or due for services performed.....	\$1,851,816	\$192,130	\$388,011	\$194,492	\$167,863	\$731,936	\$125,177	\$52,007
Wages and salaries paid.....	\$676,357	\$84,061	\$135,277	\$59,524	\$54,078	\$291,001	\$34,859	\$17,559
Wages.....	\$625,758	\$76,391	\$127,060	\$55,339	\$53,476	\$287,992	\$27,941	\$17,559
Salaries.....	\$50,599	\$7,670	\$8,217	\$4,185	\$600	\$23,009	\$6,918	.....
Number of man-hours worked by wage earners, total.....	1,239,002	91,600	243,869	136,979	91,990	590,329	50,693	33,542
Drilling wells and rig building.....	33,161	.....	.....	.....	33,161	.....	.....	.....
Doing other work.....	1,205,841	91,600	243,869	136,979	58,829	590,329	50,693	33,542
Average number of wage earners on active days, total.....	640	56	123	110	93	395	35	26
Full-time workers.....	484	48	101	49	35	217	16	18
Part-time workers.....	358	8	22	61	58	178	19	10
Average number of days active.....	289	246	320	258	282	304	310	229
Average hourly earning of wage earners.....	\$0.51	\$0.83	\$0.52	\$0.40	\$0.58	\$0.45	\$0.55	\$0.52
Horsepower rating of power equipment <sup>2</sup> .....	16,700	3,848	3,020	2,341	1,372	5,060	538	521
Per wage earner.....	20.7	70.0	24.6	25.4	15.4	13.3	14.9	17.4

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 3; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 66 were engaged in work in only 1 State; 6, in 2 States; and 1, in 3 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Indiana, New Mexico, and Pennsylvania.

<sup>2</sup> Prime movers only. No electric motors driven by purchased energy were reported.

## MINERAL INDUSTRIES

TABLE 34.—PRINCIPAL STATISTICS FOR BUILDING, REPAIRING, AND DISMANTLING RIGS AND DERRICKS BY OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	Arkansas	California	Illinois	Kansas	Louisiana
Number of contracting concerns.....	115	3	10	8	15	10
Number of persons engaged, total.....	3,847	28	701	739	251	655
Wage earners (average for the year, including inactive periods)...	3,478	22	620	662	229	608
Salaried employees.....	258	1	75	73	8	40
Proprietors and firm members (not applicable to corporations)...	111	5	6	4	14	7
Performing manual labor.....	44	.....	4	.....	8	2
Amount received or due for services performed.....	\$9,155,432	\$62,921	\$2,062,527	\$1,891,437	\$471,521	\$1,651,250
Wages and salaries paid.....	\$4,292,663	\$30,598	\$921,560	\$932,067	\$217,737	\$853,319
Wages.....	\$3,724,598	\$30,298	\$788,912	\$779,457	\$200,373	\$711,582
Salaries.....	\$568,065	\$300	\$152,648	\$152,610	\$17,364	\$141,737
Number of man-hours worked by wage earners, total.....	3,264,995	15,802	744,518	655,035	210,539	619,353
Drilling wells and rig building.....	2,959,044	15,802	578,750	641,432	185,851	520,221
Doing other work.....	305,951	.....	165,768	13,603	24,688	99,132
Average number of wage earners on active days, total.....	3,540	25	598	669	231	630
Full-time workers.....	858	12	234	113	52	212
Part-time workers.....	2,682	13	364	556	179	418
Drilling wells and rig building, total.....	3,321	25	493	656	218	544
Full-time workers.....	725	12	173	108	41	160
Part-time workers.....	2,596	13	320	550	177	384
Doing other work, total.....	219	.....	105	13	13	68
Full-time workers.....	133	.....	61	7	11	52
Part-time workers.....	86	.....	44	6	2	34
Average number of days active.....	283	123	317	301	257	331
Average hourly earning of wage earners.....	\$1.14	\$1.92	\$1.03	\$1.19	\$0.95	\$1.15
Horsepower rating of power equipment.....	14,847	.....	4,127	1,613	739	2,108
Per wage earner.....	4.3	.....	6.7	2.4	3.2	3.5

  

ITEM	Michigan	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	New Mexico and Wyoming
Number of contracting concerns.....	5	3	8	4	43	3	3
Number of persons engaged, total.....	33	17	127	32	1,196	39	29
Wage earners (average for the year, including inactive periods)...	27	14	110	27	1,098	36	25
Salaried employees.....	.....	.....	9	.....	52	.....	.....
Proprietors and firm members (not applicable to corporations)...	6	3	8	5	46	3	4
Performing manual labor.....	4	2	5	4	13	2	.....
Amount received or due for services performed.....	\$44,244	\$25,605	\$197,545	\$42,062	\$2,381,168	\$65,100	\$80,054
Wages and salaries paid.....	\$21,830	\$13,307	\$89,923	\$21,055	\$1,118,254	\$43,053	\$29,940
Wages.....	\$21,830	\$13,307	\$73,126	\$21,055	\$1,031,663	\$43,053	\$29,940
Salaries.....	.....	.....	\$16,797	.....	\$86,591	.....	.....
Number of man-hours worked by wage earners, total.....	20,973	12,560	56,995	18,632	841,632	38,100	30,856
Drilling wells and rig building.....	18,213	12,560	56,995	18,632	841,632	38,100	30,856
Doing other work.....	2,760	.....	.....	.....	.....	.....	.....
Average number of wage earners on active days, total.....	36	16	111	29	1,131	39	25
Full-time workers.....	15	6	13	5	172	9	15
Part-time workers.....	21	10	98	24	959	30	10
Drilling wells and rig building, total.....	34	16	111	29	1,131	39	25
Full-time workers.....	13	6	13	5	172	9	15
Part-time workers.....	21	10	98	24	959	30	10
Doing other work, total.....	2	.....	.....	.....	.....	.....	.....
Full-time workers.....	2	.....	.....	.....	.....	.....	.....
Part-time workers.....	.....	.....	.....	.....	.....	.....	.....
Average number of days active.....	119	169	223	163	252	258	261
Average hourly earning of wage earners.....	\$1.04	\$1.06	\$1.28	\$1.13	\$1.23	\$1.13	\$0.97
Horsepower rating of power equipment.....	78	.....	184	.....	5,780	93	125
Per wage earner.....	2.9	.....	1.7	.....	5.3	2.6	5.0

<sup>1</sup>For definition of contract services covered see table 22, footnotes 1 and 4; for explanations of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 66 were engaged in work in only 1 State; 31, in 2 States; 12, in 3 States; 2, in 5 States; 3, in 6 States; and 1, in 7 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Alabama, Indiana, Kentucky, Mississippi, and Nebraska.

TABLE 35.—PRINCIPAL STATISTICS FOR DRILLING OIL, GAS, AND DRY WELLS BY CONTRACTORS  
IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	Arkansas	California	Illinois	Indiana	Kansas	Kentucky	Louisiana	Michigan
Number of contracting concerns.....	985	13	24	89	18	82	15	39	39
Number of persons engaged, total.....	25,086	1,023	1,281	3,390	105	1,983	149	1,746	544
Wage earners (average for the year, including inactive periods).....	22,548	960	1,182	3,058	78	1,791	117	1,612	473
Salaried employees.....	1,876	59	84	241	8	134	8	109	52
Proprietors and firm members (not applicable to corporations).....	882	4	15	93	21	58	24	25	19
Performing manual labor.....	282	.....	6	29	9	15	11	1	4
Total footage of wells drilled <sup>2</sup> .....	38,897,788	1,574,148	1,307,944	5,818,234	131,458	3,258,173	153,564	2,225,028	1,020,993
Amount received or due for services performed.....	\$128,107,076	\$5,617,044	\$7,873,818	\$20,071,510	\$572,233	\$9,809,758	\$387,050	\$9,008,476	\$2,137,840
Production for the account of other concerns:									
Crude petroleum (barrels of 42 gallons).....	1,372,239	737,830	81,853	97,978	.....	9,796	.....	.....	76,989
Natural gas (thousands of cu. ft.).....	12,653,830	.....	23,148	.....	.....	650	6,800	.....	37,142
Wages and salaries paid.....	\$41,937,540	\$1,638,652	\$2,902,217	\$6,108,590	\$101,331	\$3,329,365	\$112,568	\$2,768,211	\$876,084
Wages.....	\$38,020,059	\$1,402,755	\$2,554,926	\$5,248,271	\$93,025	\$2,772,997	\$103,246	\$2,420,989	\$755,184
Salaries.....	\$5,917,481	\$235,897	\$347,291	\$860,319	\$8,306	\$556,368	\$9,322	\$347,222	\$120,920
Number of man-hours worked by wage earners, total.....	38,821,198	1,582,293	2,387,578	5,320,284	118,107	2,676,753	134,946	2,607,553	782,271
Drilling wells and rig building.....	37,594,499	1,540,419	2,243,578	5,230,107	118,107	2,651,230	134,946	2,584,495	748,036
Per foot drilled <sup>3</sup> .....	0.97	0.98	1.72	0.90	0.88	0.81	0.88	1.15	0.73
Operating and maintaining wells.....	101,809	.....	4,000	1,084	.....	1,958	.....	.....	11,812
Doing other work.....	924,890	41,874	120,000	89,113	.....	23,587	.....	43,058	22,423
Average number of wage earners on active days, total.....	25,190	971	1,308	3,285	135	1,983	145	1,845	542
Full-time workers.....	16,821	722	1,180	2,109	87	1,070	77	1,024	380
Part-time workers.....	8,569	249	148	1,176	48	893	68	821	162
Drilling wells and rig building, total...	24,559	949	1,246	3,227	135	1,944	145	1,818	523
Full-time workers.....	16,229	707	1,098	2,086	87	1,060	77	1,005	364
Part-time workers.....	8,330	242	148	1,141	48	884	68	813	159
Operating and maintaining wells, total...	69	.....	2	1	.....	1	.....	.....	6
Full-time workers.....	53	.....	2	1	.....	1	.....	.....	6
Part-time workers.....	16	.....	.....	.....	.....	.....	.....	.....	.....
Doing other work, total.....	562	22	60	57	.....	18	.....	27	13
Full-time workers.....	339	15	60	22	.....	9	.....	19	10
Part-time workers.....	223	7	.....	35	.....	9	.....	8	3
Average number of days active.....	281	335	317	311	153	236	208	284	273
Average hourly earning of wage earners.....	\$0.93	\$0.89	\$1.08	\$0.99	\$0.80	\$1.04	\$0.77	\$0.93	\$0.97
Horsepower rating of prime movers and of electric motors driven by purchased energy, total.....	678,235	14,780	66,716	76,234	1,459	58,983	2,174	41,637	6,480
Prime movers.....	684,896	14,780	66,238	73,647	1,459	56,924	2,174	41,322	6,457
Electric motors driven by purchased energy.....	13,339	.....	480	4,587	.....	2,059	.....	315	33
Horsepower rating of electric motors driven by energy generated by reporting company...	20,921	15	304	4,110	6	2,374	.....	1,597	23
Horsepower rating of prime movers and of electric motors driven by purchased energy per wage earner.....	30.1	15.4	56.4	25.6	19.2	32.9	18.6	25.8	13.7

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 5; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 808 were engaged in work in only 1 State; 136, in 2 States; 28, in 3 States; 4, in 4 States; 6, in 5 States; 1, in 6 States; 1, in 7 States; 2, in 8 States; and 1, in 10 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Florida, Nebraska, South Dakota, Tennessee, and Utah.

## MINERAL INDUSTRIES

TABLE 35.—PRINCIPAL STATISTICS FOR DRILLING OIL, GAS, AND DRY WELLS BY CONTRACTORS IN THE UNITED STATES, BY STATE: 1939—Continued

ITEM	Montana	New Mexico	New York	Ohio	Oklahoma	Pennsyl- vania	Texas	West Virginia	Colo., Miss., Mo., and Wyo.
Number of contracting concerns.....	14	15	25	30	93	124	325	32	8
Number of persons engaged, total.....	76	650	176	229	2,186	1,110	9,597	431	430
Wage earners (average for the year, including inactive periods).....	61	598	149	191	1,901	933	8,658	388	402
Salaried employees.....	3	39	1	12	191	16	688	11	20
Proprietors and firm members (not applicable to corporations).....	12	12	26	28	74	161	251	32	8
Performing manual labor.....	7	3	17	14	25	83	54	11	3
Total footage of wells drilled <sup>2</sup> .....	110,941	612,265	423,845	339,782	2,680,956	2,287,009	15,856,580	525,459	391,391
Amount received or due for services performed.....	\$362,689	\$3,308,845	\$507,952	\$528,643	\$8,748,585	\$2,666,888	\$52,068,580	\$1,217,544	\$3,239,621
Production for the account of other concerns:									
Crude petroleum (barrels of 42 gallons).....	3,800				60,424	2,321	270,780		50,470
Natural gas (thousands of cu. ft.).....						12,249,976	331,909	707	3,500
Wages and salaries paid.....	\$100,126	\$1,075,929	\$200,909	\$241,227	\$3,057,004	\$1,190,701	\$16,777,526	\$480,876	\$976,224
Wages.....	\$94,986	\$960,239	\$200,699	\$229,371	\$2,544,538	\$1,147,249	\$14,266,523	\$447,180	\$777,921
Salaries.....	\$5,160	\$115,690	\$210	\$11,856	\$512,466	\$43,452	\$2,511,003	\$33,696	\$198,303
Number of man-hours worked by wage earners, total.....	96,715	1,110,269	278,587	248,470	3,044,844	1,658,335	14,719,202	644,025	1,232,986
Drilling wells and rig building.....	94,981	1,051,576	278,587	248,455	2,932,998	1,652,338	14,387,465	638,553	1,082,630
Per foot drilled <sup>3</sup> .....	0.86	1.29	0.66	0.73	1.10	0.72	0.91	1.22	2.77
Operating and maintaining wells.....					22,368		60,609		
Doing other work.....	1,734	58,693		2,015	89,480	5,997	271,128	5,472	150,336
Average number of wage earners on active days, total.....	94	627	187	240	2,159	1,116	9,644	464	465
Full-time workers.....	67	447	157	144	1,332	913	6,351	228	353
Part-time workers.....	27	180	30	96	827	203	3,293	236	112
Drilling wells and rig building, total...	92	601	187	233	2,076	1,110	9,397	481	413
Full-time workers.....	65	423	157	144	1,285	911	6,223	226	311
Part-time workers.....	27	178	30	89	793	199	3,174	235	102
Operating and maintaining wells, total...					18		43		
Full-time workers.....					12		31		
Part-time workers.....					4		12		
Doing other work, total.....	2	28		7	65	6	204	3	52
Full-time workers.....	2	24			35	2	97	2	42
Part-time workers.....		2		7	30	4	107	1	10
Average number of days active.....	165	335	217	203	209	225	294	257	338
Average hourly earning of wage earners.....	\$0.98	\$0.86	\$0.72	\$0.92	\$0.84	\$0.69	\$0.97	\$0.69	\$0.63
Horsepower rating of prime movers and of electric motors driven by purchased energy, total.....	1,854	18,576	5,130	2,839	64,265	21,034	270,098	9,916	14,050
Prime movers.....	1,829	17,861	5,130	2,839	63,059	20,895	267,123	9,916	13,245
Electric motors driven by purchased energy.....	25	715			1,226	139	2,975		805
Horsepower rating of electric motors driven by energy generated by reporting company...	10	10			7,321	48	4,128		975
Horsepower rating of prime movers and of electric motors driven by purchased energy per wage earner.....	30.4	31.1	34.4	14.9	33.8	22.5	31.2	25.6	35.0

<sup>2</sup> For details of number, footage, and cost of drilling and equipping oil, gas, dry, and water wells on contract by concerns covered in this table, see table 36.

<sup>3</sup> Computed by dividing the total number of man-hours worked by wage earners in drilling wells and rig building (as reported by contractors covered by this table) by the total footage drilled.

## OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS

193

TABLE 36.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS BY CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	Arkansas	California	Illinois	Indiana	Kansas	Kentucky	Louisiana	Michigan
Number of wells drilled, total.....	12,322	291	250	2,265	76	1,036	92	411	445
Oil wells.....	10,024	240	214	2,008	35	857	33	331	308
Gas wells.....	744	20	14	28	12	50	27	41	7
Dry holes.....	1,554	31	22	229	29	129	29	39	130
Footage drilled, total.....	38,897,768	1,574,148	1,307,944	5,818,234	131,456	3,258,173	153,584	2,225,028	1,020,993
Oil wells.....	31,839,609	1,369,150	1,180,725	5,050,758	79,748	2,782,958	51,394	1,865,340	758,210
Gas wells.....	2,134,910	69,740	27,645	77,278	10,820	155,123	58,066	128,998	8,938
Dry holes.....	4,923,249	135,258	99,574	688,198	41,088	340,092	48,084	232,690	253,847
Average footage drilled per well, all wells <sup>2</sup> .....	3,157	5,409	5,232	2,568	1,730	3,145	1,669	5,414	2,294
Oil wells.....	3,176	5,705	5,517	2,515	2,279	3,224	1,428	5,635	2,482
Gas wells.....	2,870	3,487	1,975	2,760	685	3,102	2,077	3,098	1,277
Dry holes.....	3,168	4,363	4,528	3,005	1,417	2,638	1,589	5,968	1,953
Costs borne by contractors in drilling and equipping wells on contract, total <sup>3</sup> .....	\$96,342,859	\$4,507,633	\$6,394,009	\$14,513,611	\$279,020	\$7,759,208	\$262,042	\$6,583,880	\$1,631,898
Oil wells.....	\$79,406,318	\$3,734,754	\$5,599,068	\$12,522,710	\$164,748	\$6,641,191	\$99,793	\$5,507,746	\$1,196,867
Gas wells.....	\$4,466,789	\$162,181	\$127,412	\$162,373	\$15,674	\$399,792	\$70,101	\$396,852	\$24,913
Dry holes.....	\$12,469,752	\$610,698	\$667,511	\$1,808,528	\$98,600	\$718,225	\$92,158	\$879,482	\$410,118
Cost of drilling, total <sup>4</sup> .....	\$93,310,448	\$4,507,633	\$6,234,639	\$14,485,059	\$274,010	\$7,263,258	\$247,633	\$6,288,437	\$1,596,989
Per foot.....	\$2.40	\$2.86	\$4.77	\$2.49	\$2.08	\$2.23	\$1.61	\$2.83	\$1.56
Oil wells.....	\$76,738,581	\$3,734,754	\$5,447,650	\$12,495,538	\$164,748	\$6,155,097	\$86,944	\$5,300,875	\$1,175,784
Per foot.....	\$2.41	\$2.73	\$4.61	\$2.47	\$2.07	\$2.23	\$1.69	\$2.84	\$1.55
Gas wells.....	\$4,248,155	\$162,181	\$127,412	\$162,373	\$11,464	\$391,137	\$70,101	\$341,858	\$19,274
Per foot.....	\$1.99	\$2.33	\$4.61	\$2.36	\$1.08	\$2.52	\$1.25	\$2.89	\$2.16
Dry holes.....	\$12,323,712	\$610,698	\$659,577	\$1,807,150	\$97,800	\$717,024	\$90,588	\$645,804	\$400,931
Per foot.....	\$2.50	\$4.52	\$6.62	\$2.63	\$2.38	\$2.11	\$1.97	\$2.78	\$1.58
Cost of well equipment, total <sup>5</sup> .....	\$3,032,411	.....	\$159,370	\$28,552	\$5,010	\$495,950	\$14,409	\$298,443	\$35,909
Oil wells.....	\$2,687,737	.....	\$151,436	\$27,174	.....	\$486,094	\$12,839	\$207,071	\$21,083
Gas wells.....	\$218,634	.....	.....	.....	\$4,210	\$8,655	.....	\$54,794	\$5,639
Dry holes.....	\$146,040	.....	\$7,934	\$1,378	\$800	\$1,201	\$1,570	\$33,578	\$9,187
Casing, total.....	\$1,919,180	.....	\$99,221	\$12,989	\$3,875	\$182,548	\$9,409	\$197,684	\$25,704
Oil wells.....	\$1,645,929	.....	\$94,695	\$11,611	.....	\$172,692	\$7,839	\$118,003	\$10,878
Gas wells.....	\$140,891	.....	.....	.....	\$3,075	\$8,655	.....	\$51,104	\$5,639
Dry holes.....	\$132,360	.....	\$4,526	\$1,378	\$800	\$1,201	\$1,570	\$28,577	\$9,187
Equipment for flowing and pumping, total <sup>6</sup> .....	\$995,900	.....	\$51,797	\$14,625	\$1,135	\$270,528	\$5,000	\$80,759	\$10,000
Oil wells.....	\$918,042	.....	\$48,749	\$14,625	.....	\$270,528	\$5,000	\$72,068	\$10,000
Gas wells.....	\$68,243	.....	.....	.....	\$1,135	.....	.....	\$8,890	.....
Dry holes.....	\$9,615	.....	\$3,048	.....	.....	.....	.....	\$5,001	.....
Production derricks, total <sup>7</sup> .....	\$117,331	.....	\$8,352	\$738	.....	\$42,874	.....	\$17,000	\$205
Oil wells.....	\$103,786	.....	\$8,002	\$738	.....	\$42,874	.....	\$17,000	\$205
Gas wells.....	\$9,500	.....	.....	.....	.....	.....	.....	.....	.....
Dry holes.....	\$4,065	.....	\$350	.....	.....	.....	.....	.....	.....

<sup>1</sup> Statistics cover wells drilled by contractors covered in table 35. Statistics represent oil wells, gas wells, and dry holes drilled and completed in 1939 including those completed in 1939 although begun in 1938 and wells drilled and abandoned in 1939 before completion. Concerns were not requested to report statistics on the number of wells, footage drilled, or drilling costs of oil, gas, or dry wells that were only "spudded in," drilled deeper, or in process of drilling at the end of 1939, or for water-intake wells (for water flooding to increase oil production or for water disposal), or gas- or air-intake wells (for repressuring), or water-supply wells unless drilled and chargeable to oil- or gas-well drilling operations (in which case the cost of such water wells was to be included in the cost of drilling the oil or gas wells but the number and footage of the water wells was not called for). However, 57 wells other than those drilled on contract for oil or gas were reported (47 were water-intake wells for water flooding, mostly in the Bradford Field of Pennsylvania, 5 were water-supply wells, 4 were water-disposal wells, and 1 was an air-intake well); the total footage of these wells was 61,995 feet and the total cost of drilling them was \$47,581. All wells reported by a concern are classified in the State in which that concern did the major portion of its work. Statistics for dry holes include data for 19 wells with a total footage of 38,380 feet that were drilled and abandoned before completion. Reasons reported for abandoning these wells include "unable to fish lost tools out of hole," "gas blow-out," "encountered granite," "off structure," "unable to shut off water," "adjoining well salt water," "unable to mud off," "offset proved dry," "lease sold," and "injunction on well." These statistics exclude wells drilled on contract by concerns who operated or drilled wells for their own account and from whom complete separate reports covering the contract work were not obtained; statistics for wells drilled on contract by such concerns are given only in tables 2 and 13. These statistics also exclude wells drilled on contract by contractors whose oil- and gas-field services were valued at less than \$2,500; statistics for wells drilled by such contractors are given only in table 50.

<sup>2</sup> Computed by dividing footage drilled by number of wells.

<sup>3</sup> Contractors were requested to exclude costs borne directly by oil or gas companies for whom the contract work was performed and not covered by the amounts received by the contractor for work performed. Profits or losses cannot be calculated by subtracting the costs borne by contractors in drilling and equipping wells from amounts received or due for work performed. These costs do not include certain other important items such as taxes and interest on investment; on the other hand, the amounts received include some receipts for contract services other than drilling and equipping the wells completed.



## MINERAL INDUSTRIES

TABLE 36.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING AND EQUIPPING WELLS BY CONTRACTORS IN THE UNITED STATES, BY STATE: 1939—Continued

ITEM	Montana	New Mexico	New York	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Colorado, Mississippi, Missouri, and Wyoming
Number of wells drilled, total.....	47	211	228	158	1,000	1,268	4,236	194	114
Oil wells.....	32	197	192	49	835	1,080	3,515	27	88
Gas wells.....	4	4	11	69	30	131	139	151	6
Dry holes.....	11	10	25	40	135	77	582	16	20
Footage drilled, total.....	110,941	812,285	423,845	339,782	2,660,958	2,287,009	15,858,580	525,459	391,391
Oil wells.....	83,631	760,139	285,775	117,592	2,134,719	1,712,027	13,228,605	50,503	338,335
Gas wells.....	5,433	12,794	54,915	143,972	65,249	334,381	524,100	439,914	22,728
Dry holes.....	21,877	39,332	83,155	78,218	460,988	240,601	2,095,875	36,042	30,330
Average footage drilled per well, all wells <sup>2</sup> .....	2,360	3,850	1,859	2,151	2,661	1,804	3,744	2,709	3,433
Oil wells.....	2,613	3,859	1,488	2,400	2,557	1,615	3,788	1,870	3,845
Gas wells.....	1,358	3,199	4,992	2,087	2,175	2,553	3,771	2,907	3,788
Dry holes.....	1,989	3,933	3,326	1,955	3,415	3,125	3,601	2,253	1,518
Costs borne by contractors in drilling and equipping wells on contract, total <sup>3</sup> .....	\$276,635	\$2,271,021	\$385,088	\$417,535	\$5,502,987	\$2,032,868	\$38,960,033	\$872,755	\$2,692,636
Oil wells.....	\$216,439	\$1,937,132	\$177,880	\$135,043	\$5,081,114	\$1,212,523	\$32,528,708	\$81,072	\$2,571,528
Gas wells.....	\$14,063	\$46,099	\$68,382	\$193,213	\$137,941	\$454,017	\$1,538,586	\$735,795	\$59,595
Dry holes.....	\$46,133	\$287,790	\$118,826	\$69,279	\$1,283,832	\$366,328	\$5,074,741	\$55,888	\$61,515
Cost of drilling, total <sup>4</sup> .....	\$284,694	\$2,184,417	\$385,088	\$393,739	\$6,391,142	\$2,017,072	\$37,250,773	\$848,829	\$2,688,036
Per foot.....	\$2.39	\$2.69	\$0.91	\$1.13	\$2.40	\$0.88	\$2.35	\$1.62	\$6.87
Oil wells.....	\$208,979	\$1,856,514	\$177,880	\$134,545	\$4,971,634	\$1,211,281	\$30,970,221	\$76,815	\$2,571,528
Per foot.....	\$2.47	\$2.44	\$0.82	\$1.14	\$2.33	\$0.71	\$2.34	\$1.52	\$7.60
Gas wells.....	\$13,490	\$46,099	\$68,382	\$160,895	\$137,941	\$442,753	\$1,277,474	\$716,128	\$59,195
Per foot.....	\$2.48	\$3.60	\$1.61	\$1.12	\$2.11	\$1.32	\$2.44	\$1.63	\$2.60
Dry holes.....	\$44,225	\$281,804	\$118,826	\$68,299	\$1,281,567	\$363,038	\$5,003,078	\$55,888	\$57,315
Per foot.....	\$2.02	\$7.16	\$1.43	\$1.13	\$2.78	\$1.51	\$2.39	\$1.55	\$1.89
Cost of well equipment, total <sup>5</sup> .....	\$11,941	\$86,804	.....	\$33,798	\$111,845	\$15,796	\$1,709,260	\$23,926	\$4,600
Oil wells.....	\$9,460	\$80,618	.....	\$498	\$109,480	\$1,242	\$1,556,485	\$4,257	.....
Gas wells.....	\$573	.....	.....	\$32,318	.....	\$11,264	\$81,112	\$19,669	\$400
Dry holes.....	\$1,908	\$5,986	.....	\$980	\$2,365	\$3,290	\$71,663	.....	\$4,200
Casing, total.....	\$10,404	\$56,004	.....	\$20,007	\$57,841	\$3,836	\$1,225,940	\$9,518	\$4,200
Oil wells.....	\$8,323	\$50,018	.....	\$498	\$57,841	\$226	\$1,110,354	\$2,961	.....
Gas wells.....	\$573	.....	.....	\$18,529	.....	\$1,260	\$45,499	\$6,557	.....
Dry holes.....	\$1,508	\$5,986	.....	\$980	.....	\$2,350	\$70,087	.....	\$4,200
Equipment for flowing and pumping, total <sup>6</sup> .....	\$337	\$23,800	.....	\$13,789	\$47,732	\$1,960	\$454,808	\$14,030	\$400
Oil wells.....	\$337	\$23,800	.....	.....	\$47,732	\$516	\$418,569	\$918	.....
Gas wells.....	.....	.....	.....	\$13,789	.....	\$504	\$35,613	\$13,112	\$400
Dry holes.....	.....	.....	.....	.....	.....	\$940	\$626	.....	.....
Production derricks, total <sup>7</sup> .....	\$1,200	\$1,800	.....	.....	\$6,272	\$10,000	\$28,512	\$378	.....
Oil wells.....	\$800	\$1,800	.....	.....	\$3,907	\$500	\$27,562	\$378	.....
Gas wells.....	.....	.....	.....	.....	.....	\$9,500	.....	.....	.....
Dry holes.....	\$400	.....	.....	.....	\$2,365	.....	\$950	.....	.....

<sup>4</sup> Includes cost of labor, supplies, fuel, power, and charges for the use of machinery and tools used in such operations as the following: Moving onto location all equipment and supplies incidental to operations; excavating for derrick foundation; building derrick foundation; digging slush pit; erecting derrick; building loading or pipe racks; laying fuel and water lines; rigging up; drilling holes; making straight-hole tests and surveys; coring; testing formation; mud conditioning; reaming; running casing, screen, and liner; cleaning out; bailing; swabbing; fishing for tools or equipment; repairing and maintaining rig and derrick; tearing down rig; dismantling derrick and racks; and moving equipment off location. Total drilling costs include amounts paid to subcontractors for the performance of any of these operations. Contractors were requested to include in the cost of drilling the cost (including freight and express charges thereon) of all supplies used such as mud, weighting materials, and mud chemicals; lumber or timber for making forms, mud boxes, pipe racks, constructing derrick, etc.; cement, sand and gravel; all rig-operating supplies such as oils, grease, packing, rope, firebrick, etc.; all drilling bits, reamers, and core heads; hand tools; iron and steel for derrick and for blacksmithing; cordage and wire lines; and water if purchased or water well if drilled and chargeable to oil- or gas-well drilling operations. Contractors were requested to deduct from drilling costs the value of material salvaged after use.

<sup>5</sup> Includes cost of equipment furnished by the contractors and covered by the amounts received by them. Contractors were requested to include the cost of delivering and installing the equipment but not to duplicate costs reported under "Cost of drilling." They were also requested to deduct the value of equipment such as casing that may have been salvaged after use but to include the cost of salvaging.

<sup>6</sup> Includes cost of all equipment chargeable to the wells and necessary for production, such as tubing; packers; flow lines; flow tanks; oil and gas separators; and wellhead fittings such as Christmas tree and connections, tubing head, chokes, gauges, and anchor clamps.

<sup>7</sup> Includes cost of drilling derrick, or any portion thereof, that was furnished by contractors and retained over well for production (contractors were requested not to include this cost under "Cost of drilling"), or cost of special production derrick erected after drilling derrick was dismantled.

## OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS

195

TABLE 37.—PRINCIPAL STATISTICS FOR RUNNING, CUTTING, AND PULLING CASING, TUBES, AND RODS BY OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Illinois	Kansas	Michigan	Ohio	Oklahoma	Texas	Arkansas, Louisiana, Montana, Pennsylvania, and Wyoming
Number of contracting concerns.....	98	5	4	11	7	3	25	37	8
Number of persons engaged, total.....	1,025	72	31	181	30	28	255	389	41
Wage earners (average for the year, including inactive periods).....	865	60	26	162	22	20	216	326	33
Salaried employees.....	56	8	.....	7	.....	3	11	24	3
Proprietors and firm members (not applicable to corporations).....	104	4	5	12	8	3	28	39	5
Performing manual labor.....	41	2	2	3	6	1	14	12	1
Amount received or due for services performed.....	\$1,753,089	\$177,509	\$56,717	\$328,930	\$85,301	\$30,309	\$402,606	\$604,879	\$68,838
Wages and salaries paid.....	\$856,336	\$99,842	\$26,819	\$159,958	\$27,782	\$16,322	\$182,142	\$310,653	\$33,218
Wages.....	\$756,532	\$77,579	\$26,619	\$155,158	\$27,782	\$12,768	\$163,310	\$262,732	\$30,584
Salaries.....	\$99,804	\$22,063	.....	\$4,800	.....	\$3,554	\$18,832	\$47,921	\$2,634
Number of man-hours worked by wage earners.....	1,158,476	75,937	41,783	219,026	49,398	21,497	261,767	450,088	39,000
Average number of wage earners on active days, total.....	962	.63	29	195	25	21	255	326	47
Full-time workers.....	453	12	17	89	24	14	113	157	27
Part-time workers.....	509	51	12	106	2	7	142	169	20
Average number of days active.....	250	310	264	249	271	152	229	270	177
Average hourly earning of wage earners.....	\$0.65	\$1.02	\$0.84	\$0.71	\$0.56	\$0.59	\$0.62	\$0.58	\$0.78
Horsepower rating of power equipment.....	14,533	1,104	488	2,694	949	72	2,748	5,609	869
Per wage earner.....	16.8	18.4	18.8	16.6	43.1	3.6	12.7	17.2	26.3

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 8; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 88 were engaged in work in only 1 State; 10, in 2 States; and 2, in 3 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Colorado, Indiana, and West Virginia.

TABLE 38.—PRINCIPAL STATISTICS FOR CEMENTING WELLS BY OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Texas	Illinois, Louisiana, Michigan, and Wyoming
Number of contracting concerns.....	23	7	10	6
Number of persons engaged, total.....	1,051	148	861	42
Wage earners (average for the year, including inactive periods).....	838	107	699	32
Salaried employees.....	202	39	156	7
Proprietors and firm members (not applicable to corporations).....	11	2	6	3
Performing manual labor.....	9	2	4	3
Amount received or due for services performed.....	\$9,366,442	\$956,147	\$8,198,920	\$211,375
Wages and salaries paid.....	\$2,354,331	\$347,821	\$1,947,337	\$59,173
Wages.....	\$1,759,800	\$241,329	\$1,471,338	\$46,933
Salaries.....	\$594,731	\$106,492	\$475,999	\$12,240
Number of man-hours worked by wage earners.....	1,714,701	233,173	1,420,298	61,230
Average number of wage earners on active days, total.....	842	108	701	33
Full-time workers.....	815	98	688	29
Part-time workers.....	27	10	13	4
Average number of days active.....	347	325	356	242
Average hourly earning of wage earners.....	\$1.03	\$1.03	\$1.04	\$0.77
Horsepower rating of power equipment <sup>2</sup> .....	38,171	7,825	27,122	3,224
Per wage earner.....	45.6	73.1	38.8	100.8

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 7; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 18 were engaged in work in only 1 State; 3, in 2 States; 1, in 6 States; and 1, in 16 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Arkansas, Colorado, Indiana, Kansas, Kentucky, Mississippi, Montana, Nebraska, New Mexico, Ohio, Oklahoma, Pennsylvania, South Dakota, and Utah.

<sup>2</sup> Prime movers only. No electric motors were reported.

## MINERAL INDUSTRIES

TABLE 39.—PRINCIPAL STATISTICS FOR SHOOTING WELLS BY OIL- AND GAS-FIELD CONTRACTORS  
IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	New York	Oklahoma	Pennsylvania	Texas	Kentucky, Montana, Ohio, and West Virginia
Number of contracting concerns.....	34	3	5	5	4	10	7
Number of persons engaged, total.....	351	14	12	83	33	167	42
Wage earners (average for the year, including inactive periods)....	257	11	7	62	23	122	32
Salaried employees.....	81	4	4	20	10	38	9
Proprietors and firm members (not applicable to corporations).....	13	3	1	1	.....	7	1
Performing manual labor.....	11	3	1	1	.....	5	1
Amount received or due for services performed.....	\$3,563,538	\$32,137	\$123,127	\$890,965	\$300,386	\$1,948,707	\$288,216
Wages and salaries paid.....	\$810,441	\$13,390	\$23,740	\$240,272	\$95,254	\$361,753	\$76,032
Wages.....	\$486,180	\$13,390	\$12,117	\$124,128	\$59,239	\$223,749	\$53,557
Salaries.....	\$324,261	.....	\$11,623	\$116,144	\$36,015	\$138,004	\$22,475
Number of man-hours worked by wage earners.....	389,781	12,514	8,777	108,880	45,811	172,073	41,706
Average number of wage earners on active days, total.....	257	12	7	62	22	122	32
Full-time workers.....	199	6	5	54	19	91	24
Part-time workers.....	58	6	2	8	3	31	8
Average number of days active.....	241	210	216	250	279	242	215
Average hourly earning of wage earners.....	\$1.25	\$1.07	\$1.36	\$1.14	\$1.29	\$1.30	\$1.28
Horsepower rating of power equipment <sup>2</sup> .....	13,630	924	628	3,946	414	6,192	1,524
Per wage earner.....	53.0	84.0	89.7	63.7	18.0	50.8	47.6

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 8; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 19 were engaged in work in only 1 State; 10, in 2 States; 3, in 3 States; and 2, in 7 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Colorado, Illinois, Louisiana, Nebraska, New Mexico, North Dakota, and Wyoming.

<sup>2</sup> Prime movers only. No electric motors were reported.

TABLE 40.—PRINCIPAL STATISTICS FOR PERFORATING WELL CASING BY OIL- AND GAS-FIELD CONTRACTORS  
IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Texas
Number of contracting concerns.....	10	6	4
Number of persons engaged, total.....	499	40	459
Wage earners (average for the year, including inactive periods).....	294	35	259
Salaried employees.....	204	4	200
Proprietors and firm members (not applicable to corporations).....	1	1	.....
Performing manual labor.....	1	1	.....
Amount received or due for services performed.....	\$2,777,137	\$282,541	\$2,514,596
Wages and salaries paid.....	\$1,161,579	\$94,107	\$1,067,472
Wages.....	\$691,033	\$82,007	\$609,028
Salaries.....	\$470,546	\$12,100	\$458,446
Number of man-hours worked by wage earners.....	746,662	77,637	669,025
Average number of wage earners on active days, total.....	294	35	259
Full-time workers.....	288	29	259
Part-time workers.....	6	6	.....
Average number of days active.....	358	317	363
Average hourly earning of wage earners.....	\$0.93	\$1.06	\$0.91
Horsepower rating of power equipment.....	6,762	1,274	5,488
Per wage earner.....	23.0	36.4	21.2

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 8; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 5 were engaged in work in only 1 State; 1, in 2 States; 2, in 3 States; 1, in 5 States; and 1, in 16 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Arkansas, Colorado, Florida, Illinois, Indiana, Kansas, Kentucky, Louisiana, Mississippi, Missouri, Montana, New Mexico, Oklahoma, and Wyoming.

TABLE 41.—PRINCIPAL STATISTICS FOR ACIDIZING AND OTHER CHEMICAL TREATMENT OF WELLS BY OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	Texas	Kansas, Michigan, and West Virginia
Number of contracting concerns.....	10	5	5
Number of persons engaged, total.....	374	107	287
Wage earners (average for the year, including inactive periods).....	202	88	114
Salaried employees.....	187	18	149
Proprietors and firm members (not applicable to corporations).....	5	1	4
Performing manual labor.....	3	1	2
Amount received or due for services performed.....	\$3,285,312	\$798,999	\$2,488,313
Wages and salaries paid.....	\$710,753	\$197,046	\$513,707
Wages.....	\$247,115	\$113,822	\$133,293
Salaries.....	\$463,638	\$83,224	\$380,414
Number of man-hours worked by wage earners.....	375,077	139,007	238,070
Average number of wage earners on active days, total.....	199	90	109
Full-time workers.....	158	54	104
Part-time workers.....	41	36	5
Average number of days active.....	343	342	344
Average hourly earning of wage earners.....	\$0.66	\$0.82	\$0.56
Horsepower rating of power equipment.....	4,109	2,614	1,495
Per wage earner.....	20.3	29.7	13.1

<sup>1</sup>For definition of contract services covered see table 22, footnotes 1 and 10; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 8 were engaged in work in only 1 State; 2, in 2 States; 1, in 5 States; and 1, in 15 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Arkansas, California, Illinois, Indiana, Kentucky, Louisiana, Missouri, New Mexico, Ohio, Oklahoma, Tennessee, and Wyoming.

TABLE 42.—PRINCIPAL STATISTICS FOR CLEANING OUT, BAILING, AND SWABBING WELLS BY OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	Illinois	New Mexico	Oklahoma	Pennsylvania	Texas	California, Kansas, Louisiana, and Ohio
Number of contracting concerns.....	37	9	3	3	3	15	4
Number of persons engaged, total.....	618	115	15	94	15	354	25
Wage earners (average for the year, including inactive periods)....	533	100	10	88	14	304	19
Salaried employees.....	55	5	2	7	.....	39	2
Proprietors and firm members (not applicable to corporations).....	30	10	3	1	1	11	4
Performing manual labor.....	5	2	1	.....	1	1	.....
Amount received or due for services performed.....	\$1,586,048	\$297,796	\$51,902	\$205,342	\$26,639	\$952,526	\$51,843
Wages and salaries paid.....	\$735,537	\$140,321	\$23,808	\$104,437	\$10,466	\$433,376	\$23,107
Wages.....	\$643,011	\$136,078	\$19,008	\$85,680	\$10,466	\$370,452	\$21,307
Salaries.....	\$92,526	\$4,243	\$4,800	\$18,757	.....	\$62,926	\$1,800
Number of man-hours worked by wage earners.....	803,902	152,224	21,357	95,769	18,801	488,597	27,154
Average number of wage earners on active days, total.....	597	145	12	86	14	317	23
Full-time workers.....	302	71	9	30	8	176	10
Part-time workers.....	295	74	3	56	8	141	13
Average number of days active.....	281	208	283	305	269	308	286
Average hourly earning of wage earners.....	\$0.80	\$0.89	\$0.89	\$0.89	\$0.56	\$0.78	\$0.78
Horsepower rating of power equipment.....	8,182	1,549	258	685	560	4,880	450
Per wage earner.....	15.3	15.5	25.8	8.0	40.0	15.3	23.7

<sup>1</sup>For definition of contract services covered see table 22, footnotes 1 and 11; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 29 were engaged in work in only 1 State; 6, in 2 States; 1, in 3 States; and 1, in 4 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Arkansas, Indiana, and New York.

TABLE 43.—PRINCIPAL STATISTICS FOR DRILLING WATER WELLS BY OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Texas	Kansas, Louisiana, New Mexico, New York, Oklahoma, and Wyoming
Number of contracting concerns.....	22	4	11	7
Number of persons engaged, total.....	162	25	97	40
Wage earners (average for the year, including inactive periods).....	125	16	78	31
Salaried employees.....	12	9	2	1
Proprietors and firm members (not applicable to corporations).....	25	.....	17	8
Performing manual labor.....	11	.....	7	4
Amount received or due for services performed.....	\$404,076	\$70,378	\$212,914	\$120,784
Wages and salaries paid.....	\$142,679	\$45,224	\$63,712	\$33,743
Wages.....	\$120,369	\$23,739	\$63,247	\$33,383
Salaries.....	\$22,310	\$21,485	\$465	\$360
Number of man-hours worked by wage earners, total.....	194,974	25,689	113,083	56,202
Drilling wells.....	168,883	1,598	113,083	54,202
Doing other work.....	26,091	24,091	.....	2,000
Average number of wage earners on active days, total.....	135	15	87	33
Full-time workers.....	82	12	42	28
Part-time workers.....	53	3	45	5
Drilling wells and rig building, total.....	121	2	87	32
Full-time workers.....	69	.....	42	27
Part-time workers.....	52	2	45	5
Doing other work, total.....	14	13	.....	1
Full-time workers.....	13	12	.....	1
Part-time workers.....	1	1	.....	.....
Average number of days active.....	263	264	253	289
Average hourly earning of wage earners.....	\$0.62	\$0.92	\$0.56	\$0.59
Horsepower rating of power equipment.....	3,296	282	2,485	529
Per wage earner.....	26.4	17.6	31.9	17.1

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 12; for explanation of terms used see appropriate footnotes to table 22. Concerns were not requested to report information on the number, total footage, and total cost of water wells drilled; however 239 water wells with a total footage of 38,451 and costing \$43,490 were reported drilled on contract (as reported by contractors covered in this table) in Kansas and New York. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns 20 were engaged in work in only 1 State; 1, in 2 States; and 1, in 3 States. In addition to the States in which concerns reported they did the major portion of their work, 1 concern reported doing work in Arkansas.

TABLE 44.—PRINCIPAL STATISTICS FOR INSTALLING OIL AND GAS PRODUCTION EQUIPMENT (SUCH AS WELLHEAD FITTINGS, PUMPS, AND ENGINES) BY CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	Kansas	Texas	California and Oklahoma
Number of contracting concerns.....	12	6	3	3
Number of persons engaged, total.....	156	86	30	40
Wage earners (average for the year, including inactive periods).....	142	78	28	36
Salaried employees.....	4	2	.....	2
Proprietors and firm members (not applicable to corporations).....	10	6	2	2
Performing manual labor.....	1	1	.....	.....
Amount received or due for services performed.....	\$327,297	\$152,634	\$111,791	\$62,872
Wages and salaries paid.....	\$124,388	\$60,569	\$29,076	\$34,723
Wages.....	\$118,328	\$57,229	\$29,076	\$32,023
Salaries.....	\$6,060	\$3,360	.....	\$2,700
Number of man-hours worked by wage earners.....	185,098	93,656	45,166	46,274
Average number of wage earners on active days, total.....	149	83	29	37
Full-time workers.....	70	28	24	18
Part-time workers.....	79	55	5	19
Average number of days active.....	260	280	241	229
Average hourly earning of wage earners.....	\$0.64	\$0.61	\$0.64	\$0.63
Horsepower rating of prime movers and of electric motors driven by purchased energy, total.....	3,135	1,051	1,772	312
Prime movers.....	2,184	928	914	312
Electric motors driven by purchased energy.....	971	113	858	.....
Horsepower rating of prime movers and of electric motors driven by purchased energy per wage earner.....	22.1	13.5	63.3	8.7

<sup>1</sup> For definition of contract services covered see table 22, footnote 1; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 9 were engaged in work in only 1 State; and 3, in 2 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Illinois and New Mexico.

## OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS

199

TABLE 45.—PRINCIPAL STATISTICS FOR ERECTING, CLEANING, REPAIRING, AND DISMANTLING LEASE TANKS BY OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Kansas	Oklahoma	Texas	Illinois, Louisiana, Michigan, and New Mexico
Number of contracting concerns.....	33	7	3	6	11	6
Number of persons engaged, total.....	707	180	37	38	151	301
Wage earners (average for the year, including inactive periods).....	614	148	29	30	121	286
Salaried employees.....	87	28	5	3	22	9
Proprietors and firm members (not applicable to corporations).....	28	4	3	5	6	6
Performing manual labor.....	13	3	2	2	3	3
Amount received or due for services performed.....	\$2,415,007	\$742,391	\$85,712	\$79,283	\$805,623	\$901,998
Wages and salaries paid.....	\$798,448	\$308,544	\$34,432	\$28,780	\$149,922	\$278,770
Wages.....	\$648,189	\$231,624	\$27,532	\$21,998	\$101,920	\$265,120
Salaries.....	\$150,259	\$76,923	\$6,900	\$6,784	\$48,002	\$11,650
Number of man-hours worked by wage earners, total.....	1,028,109	314,684	50,232	34,398	141,237	487,560
Average number of wage earners on active days, total.....	653	158	25	30	147	283
Full-time workers.....	378	109	22	14	63	170
Part-time workers.....	275	49	3	16	84	123
Average number of days active.....	296	316	270	256	211	335
Average hourly earning of wage earners.....	\$0.63	\$0.74	\$0.55	\$0.64	\$0.72	\$0.54
Horsepower rating of power equipment.....	1,881	592	101	271	877	40
Per wage earner.....	3.1	4.0	3.5	9.0	7.2	0.14

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 13; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the state in which the major portion of the work was done. Of the total number of concerns, 19 were engaged in work in only 1 State; 8, in 2 States; 4, in 3 States; 1, in 4 States; and 1, in 6 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Arkansas, Indiana, and Kentucky.

TABLE 46.—PRINCIPAL STATISTICS FOR OPERATING AND MAINTAINING WELLS BY OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Michigan and Texas
Number of contracting concerns.....	8	5	3
Number of persons engaged, total.....	174	30	144
Wage earners (average for the year, including inactive periods).....	158	25	133
Salaried employees.....	11	1	10
Proprietors and firm members (not applicable to corporations).....	5	4	1
Performing manual labor.....	2	1	1
Amount received or due for services performed.....	\$411,427	\$50,050	\$361,377
Production for the account of other concerns:			
Crude petroleum (barrels).....	12,448	12,448	.....
Natural gas (thousands of cu. ft.).....	180	180	.....
Wages and salaries paid.....	\$270,183	\$24,576	\$245,607
Wages.....	\$201,378	\$24,326	\$177,052
Salaries.....	\$68,805	\$250	\$68,555
Number of man-hours worked by wage earners.....	297,787	44,875	252,912
Average number of wage earners on active days, total.....	161	25	136
Full-time workers.....	90	15	75
Part-time workers.....	71	10	61
Average number of days active.....	356	318	363
Average hourly earning of wage earners.....	\$0.88	\$0.54	\$0.70
Horsepower rating of power equipment <sup>2</sup> .....	1,875	330	1,545
Per wage earner.....	11.9	13.2	11.6

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 14; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 7 were engaged in work in only 1 State, and 1, in 3 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Louisiana and New Mexico.

<sup>2</sup> Prime movers only. No electric motors were reported.

TABLE 47.—PRINCIPAL STATISTICS FOR OIL- AND GAS-FIELD MACHINE-SHOP AND REPAIR WORK PERFORMED BY CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Illinois	Louisiana	Oklahoma	Texas	Kansas and New Mexico
Number of contracting concerns.....	97	38	6	7	10	31	5
Number of persons engaged, total.....	1,461	443	47	158	125	632	56
Wage earners (average for the year, including inactive periods).....	1,152	327	34	137	95	517	42
Salaried employees.....	207	78	4	12	19	86	10
Proprietors and firm members (not applicable to corporations).....	102	40	9	9	11	29	4
Performing manual labor.....	57	25	4	2	10	16	.....
Amount received or due for services performed.....	\$5,833,144	\$1,842,434	\$151,678	\$361,700	\$428,808	\$2,621,401	\$227,125
Wages and salaries paid.....	\$2,306,799	\$725,701	\$45,944	\$216,507	\$192,452	\$1,041,294	\$64,901
Wages.....	\$1,723,458	\$522,505	\$39,984	\$184,010	\$146,417	\$782,829	\$67,711
Salaries.....	\$583,345	\$203,196	\$5,960	\$32,497	\$46,035	\$278,465	\$17,190
Number of man-hours worked by wage earners.....	2,223,786	640,101	44,096	236,722	163,058	1,067,330	70,479
Average number of wage earners on active days, total.....	1,165	335	34	139	95	517	45
Full-time workers.....	972	276	17	96	83	471	29
Part-time workers.....	193	59	17	43	12	46	16
Average number of days active.....	303	296	340	336	287	305	277
Average hourly earning of wage earners.....	\$0.78	\$0.82	\$0.91	\$0.77	\$0.90	\$0.71	\$0.96
Horsepower rating of prime movers and of electric motors driven by purchased energy, total.....	14,162	4,971	1,017	2,432	672	4,547	543
Prime movers.....	8,381	3,279	904	1,554	195	2,271	178
Electric motors driven by purchased energy.....	5,801	1,692	113	878	477	2,276	365
Horsepower rating of electric motors driven by energy generated by reporting company.....	339	74	162	.....	.....	93	10
Horsepower rating of prime movers and of electric motors driven by purchased energy, per wage earner.....	12.3	15.2	29.9	17.8	7.1	8.8	12.9

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 15; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 83 were engaged in work in only 1 State; 9, in 2 States; 4, in 3 States; and 1, in 4 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Arkansas, Indiana, Kentucky, and Mississippi.

TABLE 48.—PRINCIPAL STATISTICS FOR GENERAL WELL SERVICING BY OIL- AND GAS-FIELD CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	California	Illinois	Kansas	Louisiana	Oklahoma	Texas	Wyoming	Michigan, Missouri, and New Mexico	New York and Pennsylvania
Number of contracting concerns.....	83	9	9	3	6	13	33	3	4	3
Number of persons engaged, total.....	1,896	117	119	56	51	310	1,071	69	50	53
Wage earners (average for the year, including inactive periods).....	1,695	94	102	52	41	283	975	64	40	44
Salaried employees.....	111	13	4	.....	5	19	57	1	5	7
Proprietors and firm members (not applicable to corporations).....	90	10	13	4	5	8	39	4	5	2
Performing manual labor.....	24	3	3	.....	3	2	9	2	1	1
Amount received or due for services performed.....	\$4,864,982	\$383,713	\$254,056	\$77,299	\$153,108	\$803,291	\$2,802,236	\$73,473	\$127,100	\$190,706
Wages and salaries, total.....	\$2,053,858	\$165,098	\$108,174	\$43,572	\$35,281	\$328,622	\$1,198,311	\$51,738	\$52,200	\$70,652
Wages.....	\$1,792,342	\$137,046	\$103,428	\$43,572	\$30,361	\$283,008	\$1,047,909	\$50,898	\$40,969	\$55,151
Salaries.....	\$261,516	\$28,052	\$4,746	.....	\$4,920	\$45,614	\$150,402	\$840	\$11,231	\$15,501
Number of man-hours worked by wage earners, total.....	2,551,592	137,920	119,307	81,161	56,969	401,554	1,537,715	74,355	58,493	84,118
Drilling wells and rig building.....	46,793	.....	4,075	.....	.....	10,000	12,392	20,326	.....	.....
Doing other work.....	2,504,799	137,920	115,232	81,161	56,969	391,554	1,525,323	54,029	58,493	84,118
Average number of wage earners on active days, total.....	1,851	98	109	50	49	342	1,048	63	49	43
Full-time workers.....	1,065	45	39	33	24	182	654	27	30	31
Part-time workers.....	786	53	70	17	25	160	394	36	19	12
Average number of days active.....	279	294	234	300	246	233	285	363	228	297
Average hourly earning of wage earners.....	\$0.70	\$0.99	\$0.87	\$0.54	\$0.53	\$0.70	\$0.68	\$0.68	\$0.70	\$0.68
Horsepower rating of prime movers and of electric motors driven by purchased energy, total.....	40,760	1,846	1,782	1,274	1,213	3,793	28,468	612	457	1,295
Prime movers.....	38,628	1,816	1,782	1,274	1,198	3,793	26,423	612	435	1,295
Electric motors driven by purchased energy.....	2,132	30	.....	.....	15	.....	2,065	.....	22	.....
Horsepower rating of prime movers and of electric motors driven by purchased energy, per wage earner.....	24.0	19.6	17.5	24.5	29.6	13.4	29.2	9.6	11.4	29.4

<sup>1</sup> For definition of contract services covered see table 22, footnotes 1 and 16; for explanation of terms used see appropriate footnotes to table 22. Concerns are classified in the State in which the major portion of the work was done. Of the total number of concerns, 62 were engaged in work in only 1 State; 14, in 2 States; 3, in 3 States; 1, in 4 States; 1, in 5 States; 1, in 6 States; and 1, in 7 States. In addition to the States in which concerns reported they did the major portion of their work, concerns reported doing work in Arkansas, Indiana, Iowa, Nebraska, and West Virginia.



## MINERAL INDUSTRIES

TABLE 49.—PRINCIPAL STATISTICS FOR OIL- AND GAS-FIELD SERVICES PERFORMED BY SMALL CONTRACTORS IN THE UNITED STATES, BY MAJOR TYPE OF WORK AND BY STATE: 1939<sup>1</sup>

TYPE OF WORK AND STATE	Number of contracting concerns	NUMBER OF PERSONS ENGAGED					Amount received or due for services performed	WAGES AND SALARIES PAID			POWER EQUIPMENT <sup>2</sup>	
		Total	Wage earners (average for the year, including inactive periods)	Salaried employees	Number of proprietors and firm members (not applicable to corporations)			Total	Wages	Salaries	Number of units	Aggregate horsepower rating
					Total	Performing manual labor						
United States, total.....	156	276	96	3	177	132	\$153,500	\$48,546	\$48,301	\$245	104	5,998
Exploration and well-surveying work <sup>3</sup> .....	6	11	2	1	8	7	\$5,327	\$375	\$300	\$75	3	326
Hauling oil- and gas-field supplies and equipment, total.....	26	33	5	1	27	21	\$17,886	\$2,303	\$2,283	\$20	21	1,652
Kansas.....	6	8	2	.....	6	6	\$5,710	\$893	\$893	.....	3	241
Ohio.....	3	3	.....	.....	3	3	\$84	.....	.....	.....	1	78
Texas.....	4	5	1	1	3	1	\$2,743	\$590	\$570	\$20	4	319
Other States <sup>4</sup> .....	13	17	2	.....	15	11	\$9,351	\$820	\$820	.....	13	1,014
Excavating slush pits and cellars, grading, and building foundations at well locations, total.....	24	50	24	.....	26	20	\$21,043	\$8,040	\$8,040	.....	9	570
California.....	3	5	1	.....	4	3	\$1,974	\$321	\$321	.....	4	276
Kansas.....	4	6	1	.....	5	4	\$2,167	\$337	\$337	.....	1	40
Oklahoma.....	4	5	1	.....	4	4	\$2,010	\$793	\$793	.....	.....	.....
Texas.....	8	26	16	.....	8	6	\$9,287	\$4,353	\$4,353	.....	.....	.....
Other States <sup>5</sup> .....	5	8	3	.....	5	3	\$5,625	\$2,236	\$2,236	.....	4	254
Building, repairing, and dismantling rigs and derricks, total.....	11	29	15	.....	14	14	\$12,338	\$5,235	\$5,235	.....	.....	.....
Texas.....	4	9	3	.....	6	6	\$5,400	\$1,707	\$1,707	.....	.....	.....
West Virginia.....	3	8	5	.....	3	3	\$3,259	\$1,510	\$1,510	.....	.....	.....
Other States <sup>6</sup> .....	4	12	7	.....	5	5	\$3,679	\$2,018	\$2,018	.....	.....	.....
Drilling oil, gas, and dry wells, total <sup>7</sup> .....	34	82	20	1	41	23	\$46,643	\$17,348	\$17,198	\$150	34	21,798
Kansas.....	3	6	2	.....	4	1	\$3,249	\$1,622	\$1,622	.....	3	247
Ohio.....	4	6	2	.....	4	2	\$5,357	\$2,365	\$2,365	.....	4	2150
Oklahoma.....	7	13	4	.....	9	6	\$8,583	\$3,282	\$3,282	.....	6	305
Pennsylvania.....	4	7	3	.....	4	2	\$6,572	\$1,973	\$1,973	.....	3	165
Texas.....	6	13	4	1	8	5	\$8,793	\$2,950	\$2,800	\$150	10	2650
Other States <sup>8</sup> .....	10	17	5	.....	12	7	\$14,089	\$5,136	\$5,136	.....	8	281
Running, cutting, and pulling casing, tubes, and rods, total.....	11	21	10	.....	11	6	\$12,607	\$4,231	\$4,231	.....	8	235
Oklahoma.....	6	13	7	.....	6	4	\$5,766	\$1,295	\$1,295	.....	1	78
Other States <sup>9</sup> .....	5	8	3	.....	5	2	\$6,841	\$2,936	\$2,936	.....	7	157
Shooting wells <sup>10</sup> .....	3	4	1	.....	3	3	\$2,770	\$630	\$630	.....	3	234
Cleaning out, bailing, and swabbing wells, total.....	10	17	4	.....	13	12	\$7,873	\$2,757	\$2,757	.....	8	608
Pennsylvania.....	5	8	1	.....	7	7	\$3,527	\$1,089	\$1,089	.....	4	227
Other States <sup>11</sup> .....	5	9	3	.....	6	5	\$4,346	\$1,668	\$1,668	.....	4	379
Drilling water wells <sup>12</sup> .....	7	9	2	.....	7	6	\$4,576	\$1,252	\$1,252	.....	4	121
Erecting, cleaning, repairing, and dismantling lease tanks, total.....	6	10	2	.....	8	6	\$4,462	\$637	\$637	.....	1	85
Kansas.....	3	5	1	.....	4	3	\$2,623	\$305	\$305	.....	1	85
Other States <sup>13</sup> .....	3	5	1	.....	4	3	\$1,839	\$332	\$332	.....	.....	.....
Oil- and gas-field machine-shop and repair work, total.....	9	14	5	.....	9	8	\$7,935	\$2,044	\$2,044	.....	5	193
Texas.....	3	5	2	.....	3	2	\$2,995	\$275	\$275	.....	3	85
Other States <sup>14</sup> .....	6	9	3	.....	6	6	\$4,940	\$1,769	\$1,769	.....	2	108
General well servicing and installing production equipment (such as wellhead fittings, pumps, and engines), total.....	9	16	6	.....	10	6	\$10,038	\$3,694	\$3,694	.....	8	178
California.....	3	6	2	.....	4	3	\$4,015	\$1,705	\$1,705	.....	7	100
Other States <sup>15</sup> .....	6	10	4	.....	6	3	\$6,023	\$1,989	\$1,989	.....	1	78

<sup>1</sup> Statistics cover services performed by contractors whose oil- and gas-field services performed in 1939 were valued at less than \$2,500 and for which statistics are not shown in tables 12 and 13 and tables 22 through 46. For explanations of terms used see appropriate footnotes to table 22.

<sup>2</sup> Prime movers only. No electric motors driven by purchased energy were reported. In addition, 3 electric motors driven by energy generated by the reporting company, with a total horsepower rating of 18, were reported by concerns in Ohio and Texas.

<sup>3</sup> California, 1 concern; Kansas, 1; Michigan, 1; Mississippi, 1; Oklahoma, 1; and Texas, 1.

<sup>4</sup> Arkansas, 1 concern; California, 1; Colorado, 2; Illinois, 2; Kentucky, 1; Louisiana, 1; Montana, 1; Oklahoma, 1; West Virginia, 1; and Wyoming, 2.

<sup>5</sup> Colorado, 1 concern; Illinois, 1; and Wyoming, 3.

<sup>6</sup> California, 1 concern; Kansas, 1; Michigan, 1; and Ohio, 1.

<sup>7</sup> Detailed statistics for the number, footage, and costs of drilling wells on contract by concerns covered in this table are shown in table 50.

<sup>8</sup> Colorado, 1 concern; Illinois, 1; Indiana, 2; Kentucky, 1; Michigan, 2; Montana, 1; and West Virginia, 2.

<sup>9</sup> California, 1 concern; Kansas, 1; Ohio, 2; and West Virginia, 1.

<sup>10</sup> Kansas, 1 concern; Montana, 1; and Oklahoma, 1.

<sup>11</sup> Illinois, 1 concern; Ohio, 1; Oklahoma, 1; Texas, 1; and West Virginia, 1.

<sup>12</sup> California, 1 concern; Michigan, 2; New York, 1; Oklahoma, 1; and Texas, 2. Concerns were not requested to report information on the number, total footage, and total cost of water wells drilled; however 3 water wells with a total footage of 2,119, and costing \$1,785, were reported by concerns in New York and Texas.

<sup>13</sup> Illinois, 1 concern; Oklahoma, 1; and Texas, 1.

<sup>14</sup> California, 2 concerns; Illinois, 1; Kansas, 1; Louisiana, 1; and Oklahoma, 1.

<sup>15</sup> Kansas, 2 concerns; Oklahoma, 2; and Texas, 2.

## OIL- AND GAS-FIELD SERVICES PERFORMED BY CONTRACTORS

203

TABLE 50.—NUMBER AND FOOTAGE OF OIL, GAS, AND DRY WELLS DRILLED AND COST OF DRILLING WELLS BY SMALL CONTRACTORS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	Kansas	Ohio	Oklahoma	Pennsylvania	Texas	Colorado, Michigan, and Montana	Illinois and Indiana	Kentucky and West Virginia
Number of wells drilled, total.....	48	2	7	9	4	14	7	3	2
Oil wells.....	20	1	6	3	1	5	3	.....	1
Gas wells.....	13	1	1	4	1	.....	4	2	.....
Dry holes.....	15	.....	.....	2	2	9	.....	1	1
Footage drilled, total.....	37,304	1,325	5,534	9,175	3,756	8,424	4,425	2,400	2,265
Oil wells.....	17,213	652	4,172	3,597	981	3,036	3,425	.....	1,350
Gas wells.....	8,104	673	1,362	1,994	1,275	.....	1,000	1,800	.....
Dry holes.....	11,987	.....	.....	3,584	1,500	5,388	.....	600	915
Average footage drilled per well, all wells.....	777	662	791	1,019	939	602	632	800	1,132
Oil wells.....	861	652	695	1,199	981	607	1,142	.....	1,350
Gas wells.....	623	673	1,362	499	1,275	.....	250	900	.....
Dry holes.....	799	.....	.....	1,792	750	599	.....	600	915
Costs borne by contractors in drilling wells on contract, total <sup>2</sup> ....	\$27,743	\$793	\$4,544	\$5,150	\$2,662	\$6,728	\$4,062	\$2,402	\$1,397
Per foot.....	\$0.74	\$0.60	\$0.82	\$0.56	\$0.71	\$0.80	\$0.92	\$1.00	\$0.62
Oil wells.....	\$13,760	\$450	\$3,573	\$2,469	\$887	\$2,792	\$2,562	.....	\$1,027
Per foot.....	\$0.80	\$0.69	\$0.86	\$0.69	\$0.90	\$0.92	\$0.75	.....	\$0.76
Gas wells.....	\$6,275	\$348	\$971	\$661	\$1,275	.....	\$1,500	\$1,500	.....
Per foot.....	\$0.77	\$0.52	\$0.71	\$0.34	\$1.00	.....	\$1.50	\$0.83	.....
Dry holes.....	\$7,708	.....	.....	\$2,000	\$500	\$3,936	.....	\$902	\$370
Per foot.....	\$0.64	.....	.....	\$0.56	\$0.33	\$0.73	.....	\$1.50	\$0.40

<sup>1</sup> Statistics cover wells drilled by contractors included in table 49. For explanation of terms used see appropriate footnotes to table 36.<sup>2</sup> In addition to drilling costs, the only cost of equipping wells reported was \$550 for casing.

## Natural Gasoline

The natural-gasoline industry extracted 2,141,779,000 gallons of natural gasoline from natural gas in 1939 and had products valued at \$96,338,000. Major products other than natural gasoline consisted of 385,131,000 gallons of liquefied petroleum gases.<sup>1</sup>

### USES OF PRODUCTS

About 78 percent of the natural gasoline produced in the United States in 1935-39 was blended with gasoline refined from crude petroleum. The proportion of natural gasoline in the motor-fuel output of refineries averaged about 7 percent, according to the United States Bureau of Mines. About 14 percent of the natural gasoline produced was shipped directly to jobbers and retailers, or lost through evaporation, and 8 percent was exported. Exports declined sharply in 1940 and 1941, however, principally because of Government restrictions on the export of materials suitable for use in aviation fuel.

The bulk of the liquefied petroleum gases, principally propane, butane, and propane-butane mixtures, is used for domestic heating, cooking, and refrigeration, for industrial fuel, and for driving internal-combustion engines. Many industrial plants use this fuel in their manufacturing processes. Liquefied petroleum gases are also a source of some of the chemicals needed in the manufacture of explosives and plastics.

### PRINCIPAL EXPENSES

The industry employed an average of 8,332 wage earners in 1939 and paid a total of \$13,212,000 in wages—an average of 79 cents per man-hour. Salaried employees, of whom there were 2,005 in October, were paid \$5,052,000. Expenditures during the year for supplies and materials (excluding natural gas treated) totaled \$8,653,000; for fuel, \$6,300,000; for purchased electric energy, \$355,000; and for work done on contract, \$3,984,000. These principal expenses totaled \$37,856,000. Profits or losses cannot be calculated by subtracting these expenses from the value of products shown, since expenses such as cost of natural gas treated, depreciation, taxes, interest, rent, insurance, and other costs are not included. Moreover, the value of the natural gasoline, liquefied petroleum gases, and miscellaneous secondary products does not indicate the net amount received by the companies in the industry, for it does not take into account the natural-gas producers' share of the value of these products and of the residue gas sold.

Buildings erected and machinery and equipment installed during the year cost \$13,030,000. Of this amount, \$11,569,000 represented expenditures for machinery and equipment; the remainder was spent for new buildings and major alterations to existing structures. These figures on capital expenditures include installation costs, which are partly duplicated in the other expenses reported.

### PRODUCTION

Natural gasoline was produced by 734 plants in 1939 compared with 1,115 plants in 1919. Four principal methods of

natural-gasoline extraction were used in 1939—compression, absorption, charcoal, and a combination of compression and absorption processes.<sup>2</sup> The compression method, which accounted for three-fourths of the natural-gasoline production in 1919, supplied only 13 percent of the 1939 output. The absorption process, in which gasoline is extracted by bringing the natural gas into contact with oils heavier than gasoline, was used in the recovery of 78 percent of the total output in 1939. Charcoal absorption accounted for 0.3 percent, and combinations of compression and absorption methods accounted for over 9 percent of the production. Of the total number of active plants in 1939, 366 used the absorption method of gasoline extraction; 303, the compression method; 8, the charcoal method; and 44, a combination of methods. The method used by 11 small plants was not reported. The total of 2,141,779,000 gallons of natural gasoline produced in 1939 is almost 400 percent more than the quantity produced in 1919 and about 30 percent more than the 1935 production. Natural-gasoline plants in Texas produced 760,793,000 gallons; those in California, 604,597,000 gallons; and those in Oklahoma, 428,107,000 gallons. These three States accounted for 84 percent of the total production.

Although the quantity of natural gasoline produced in 1939 was almost five times that of 1919, the total value of the gasoline was only 11 percent higher, the average value per gallon at plants having declined from 17.3 cents in 1919 to 4.1 cents in 1939. Other products of natural-gasoline plants in 1939 were valued at \$8,595,000. These products included liquefied petroleum gases valued at \$7,156,000; motor fuel valued at \$623,000 (excluding value of natural gasoline entering into its production); naphtha and other oils, \$662,000; electric energy sold, \$26,000; and receipts for services performed for others, \$127,000.

### NATURAL GAS TREATED AND DISPOSAL OF RESIDUE GAS

About three-fourths of all natural gas produced in the United States in 1939, as reported to the Bureau of the Census, was treated for the recovery of natural gasoline.<sup>3</sup> In 1939 natural-gasoline plants treated 2,200,167,000 thousand cubic feet of natural gas, of which 1,306,737,000 thousand cubic feet, or 59 percent, was "casinghead" gas (gas from wells that produced both gas and oil) and 893,430,000 thousand cubic feet, or 41 percent, was "dry" gas (gas from wells that produced only gas). The average yield of natural gasoline per thousand cubic feet of gas treated was 0.97 gallon at all plants—0.88 gallon at absorption plants, 1.55 gallons at compression plants, 1.74 gallons at combination plants, and 0.23 gallon at charcoal plants. The average yield ranged from 0.21 gallon in Kentucky to 1.84 gallons in Oklahoma; the average for Texas was 0.80 gallon; for California, 1.60 gallons; and for Louisiana, 0.77 gallon. The yield was lower at plants treating a larger proportion of dry gas than of casinghead gas.

The quantity of "residue gas"—gas remaining after extraction of gasoline—totaled 2,002,706,000 thousand cubic feet. Of this amount, 46 percent was delivered to concerns other than producers of the gas treated, 28 percent was returned to producers of gas treated, 15 percent was used by operating companies (principally for fuel at plant and well operations), and

<sup>1</sup>These statistics cover natural-gasoline extraction plants (including recycling plants) which produced natural gasoline (including condensate) whether operated as independent units or at wellheads in conjunction with the production of natural gas. Statistics are excluded for natural-gasoline plants operated by concerns producing crude petroleum, natural gas, and natural gasoline, and rendering oil- and gas-field services whose reports covering these activities indicated that neither the value of products and services rendered, nor reported principal expenses, nor cost of buildings, machinery, and equipment, nor cost of drilling and equipping wells amounted to as much as \$2,500 during the year. Twenty-eight such small plants reported as producing natural gasoline in 1939 had an output of 167,513 gallons valued at \$7,526. Statistics are also excluded for "drip" gasoline recovered from oil- and gas-well operations; 36,068,703 gallons of such drip gasoline valued at \$1,179,545 were produced in 1939.

<sup>2</sup>Statistics for compression and absorption plants include the production of "condensate" at recycling operations. Use of the latter process in Texas has expanded rapidly in recent years. According to reports of the Railroad Commission of Texas, the number of recycling plants operating in that State in 1939 increased from 8 in January to 22 in December; by the end of 1940 the number had increased to 32. Recycling plants in Texas, as reported to the Bureau of the Census, produced 52,289,000 gallons of condensate in 1939 from 79,534,000 thousand cubic feet of natural gas.

<sup>3</sup>The proportion stated should be regarded as approximate. Natural-gas producers were requested to report the "marketed production" of natural gas and the "best estimate" of "all other production." It is believed likely that some of the natural gas wasted at gas wells was not regarded as "production" by some respondents and hence was not reported.

11 percent was blown to air (wasted). Plants in Texas accounted for almost half of the total quantity of gas reported blown to air.

"Shrinkage"—total gas treated less total residue gas—amounted to 197,461,000 thousand cubic feet, or 9.0 percent of the total gas treated in the United States. The ratio of shrinkage to total gas treated was 7.8 percent in Texas, 13.6 percent in California, 15.2 percent in Oklahoma, and 4.4 percent in Louisiana. Shrinkage amounted to 8.0 percent of the gas treated at absorption plants, 17.4 percent at compression plants, 1.8 percent at charcoal plants, and 13.5 percent at plants using a combination of methods.

#### EMPLOYMENT AND WORKING TIME

The average of 8,332 wage earners employed by the natural-gasoline industry in 1939 was about 4 percent higher than in 1935. Plants in Texas, California, and Oklahoma employed 75 percent of the total. Absorption plants employed 5,949 wage earners, or 71 percent of the total. Nine-tenths of the wage earners employed on active days were full-time employees and the remaining 10 percent were part-time workers. In addition, 2,005 salaried employees and 10 proprietors and firm members were reported for October of the year.

Wage earners employed by the industry worked a total of 16,634,000 man-hours, 98.8 percent on active days when plants were engaged in production and the remainder on inactive days when only watchmen or maintenance men were employed. For the industry as a whole, plants were active an average of 346 days during the year.

#### OUTPUT PER MAN-HOUR AND HOURLY EARNINGS

The average output of natural gasoline per man-hour worked by wage earners at all plants was 129 gallons in 1939. Operations in California averaged 220 gallons per man-hour; the average for Texas was 130; for Oklahoma, 102; and for Louisiana, 146. Output per man-hour averaged 135 gallons at absorption plants, 100 gallons at compression plants, 43 gallons at charcoal plants, and 135 gallons at plants using a combination of methods.

The hourly earning of wage earners, which averaged 79 cents for the industry as a whole, varied from 99 cents in California to 65 cents in Kentucky. The average for Texas was 74 cents; for Oklahoma, 79 cents; and for Louisiana, 78 cents. These figures for hourly earnings are general averages for all classes of wage earners and should not be interpreted as hourly wage rates. The latter apply to specific occupations and take account of special conditions of work.

#### POWER EQUIPMENT AND ENERGY CONSUMED

Power equipment in use or available for use by the industry at the end of the year had an aggregate rated capacity of 772,302 horsepower. About 98 percent of this total represented the rating of prime movers; the remainder, that of electric motors driven by purchased energy.

The industry consumed 165,975,000 kilowatt-hours of electric energy in 1939, of which 128,963,000 kilowatt-hours, or 78 percent, were generated by the reporting companies for their own use; the remainder was purchased. Natural-gasoline plants also consumed 20,130 short tons of bituminous coal, 53,743 barrels of fuel oils, 38,699 gallons of gasoline and kerosene, and 177,770,000 thousand cubic feet of natural gas.

## MINERAL INDUSTRIES

TABLE 51.—PRINCIPAL STATISTICS FOR THE NATURAL-GASOLINE INDUSTRY IN THE UNITED STATES,  
BY STATE: 1939<sup>1</sup>

[For producing operations only]

ITEM	United States	Arkansas	California	Illinois	Kansas	Kentucky	Louisiana	New Mexico
Number of operating companies.....	<sup>2</sup> 295	7	37	22	11	4	16	5
Number of plants.....	734	9	96	53	18	6	29	6
Number of persons engaged, total.....	<sup>4</sup> 10,347	103	2,026	73	253	66	431	156
Wage earners (average for the year) <sup>3</sup> .....	<sup>4</sup> 8,332	89	1,441	69	218	63	349	136
Salaries.....	2,005	14	585	4	35	3	82	20
Proprietors and firm members (not applicable to corporations).....	10	.....	.....	.....	.....	.....	.....	.....
Performing manual labor about the plant.....	2	.....	.....	.....	.....	.....	.....	.....
Production of natural gasoline (gallons).....	2,141,778,805	24,837,570	604,596,961	4,105,510	61,166,104	7,696,708	93,389,378	54,372,551
Value of natural gasoline at plants.....	\$67,742,848	\$939,575	\$34,246,337	\$233,599	\$1,976,271	\$343,001	\$3,313,344	\$1,686,041
Value of all products.....	\$96,337,733	\$939,575	\$36,132,917	\$237,536	\$2,140,420	\$706,139	\$3,482,080	\$1,766,123
Principal expenses designated below, total <sup>6</sup> .....	<sup>4</sup> \$37,655,612	\$352,290	\$7,634,099	\$127,617	\$775,707	\$365,131	\$1,592,766	\$652,619
Wages <sup>3</sup> .....	\$13,212,248	\$138,168	\$2,735,037	\$82,138	\$321,482	\$65,184	\$496,068	\$231,682
Salaries.....	<sup>4</sup> \$5,051,699	\$25,218	\$1,640,030	\$7,357	\$65,439	\$7,943	\$349,325	\$40,033
Supplies and materials.....	\$8,652,948	\$78,382	\$1,488,008	\$25,643	\$152,024	\$226,868	\$407,826	\$172,809
Fuel.....	\$6,600,147	\$109,791	\$1,437,017	\$7,642	\$202,731	\$64,046	\$194,145	\$198,067
Purchased electric energy.....	\$354,702	\$450	\$127,722	\$1,357	\$9,301	\$1,090	\$12,334	.....
Contract work.....	\$3,983,628	\$283	\$506,285	\$3,480	\$24,730	.....	\$133,070	\$10,036
Cost of buildings, machinery, and equipment erected or installed during the year.....	\$13,029,865	\$245,385	\$1,632,722	\$590,929	\$181,674	\$11,197	\$698,622	\$153,712
Buildings.....	\$1,460,464	.....	\$337,309	\$54,111	\$9,459	\$3,094	\$51,278	.....
Machinery and equipment.....	\$11,569,421	\$245,385	\$1,245,413	\$536,818	\$172,215	\$8,103	\$647,344	\$153,712
Number of man-hours worked by wage earners, total <sup>3</sup> ...	16,633,710	184,489	2,752,305	116,476	440,217	130,700	640,480	312,825
On active days <sup>7</sup> .....	16,428,445	184,489	2,743,348	115,688	437,169	130,497	593,399	310,137
On inactive days <sup>7</sup> .....	205,265	.....	8,959	788	3,048	203	47,081	2,688
Average number of wage earners on active days <sup>3</sup> .....	8,608	90	1,487	93	234	64	414	137
Full-time.....	7,711	77	1,410	80	215	56	308	135
Part-time.....	897	13	77	13	19	8	106	2
Average number of days plants were active <sup>8</sup> .....	346	361	353	266	332	362	284	357
Average hourly earning of wage earners.....	\$0.79	\$0.75	\$0.99	\$0.71	\$0.73	\$0.65	\$0.77	\$0.74
Gallons of natural gasoline produced per man-hour <sup>8</sup> ...	128.8	134.8	219.7	35.2	138.9	58.9	145.8	173.8
Horsepower rating of power equipment.....	772,302	6,796	191,585	4,714	17,518	2,248	29,887	13,858
Per wage earner.....	92.7	76.4	133.0	68.3	80.4	35.7	86.6	100.4
Electric energy consumed (thousands of kw.-hrs.), total.....	165,975	142	15,611	103	5,807	117	3,699	4,204
Purchased.....	37,012	11	13,423	90	846	47	690	.....
Generated by reporting companies.....	128,963	131	2,188	13	4,969	70	3,009	4,204

ITEM	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Wyoming	Colorado, Michigan, Montana, and New York
Number of operating companies.....	7	55	70	90	24	5	5
Number of plants.....	12	139	107	169	78	7	5
Number of persons engaged, total.....	92	2,424	147	3,441	894	173	42
Wage earners (average for the year) <sup>3</sup> .....	82	2,018	134	2,766	774	157	34
Salaries.....	10	403	12	669	120	16	6
Proprietors and firm members (not applicable to corporations).....	.....	3	1	6	.....	.....	.....
Performing manual labor about the plant.....	.....	1	1	.....	.....	.....	.....
Production of natural gasoline (gallons).....	7,476,627	428,107,437	12,444,056	760,792,694	46,619,404	30,684,892	5,486,916
Value of natural gasoline at plants.....	\$353,327	\$15,057,483	\$545,624	\$25,314,470	\$1,914,029	\$1,565,148	\$254,599
Value of all products <sup>5</sup> .....	\$367,956	\$16,392,872	\$593,872	\$26,252,067	\$3,395,688	\$1,567,690	\$313,828
Principal expenses designated below, total <sup>6</sup> .....	\$279,053	\$7,819,733	\$475,393	\$14,056,885	\$2,662,489	\$559,332	\$114,641
Wages <sup>3</sup> .....	\$125,968	\$3,318,033	\$155,498	\$4,325,756	\$880,045	\$274,322	\$44,863
Salaries.....	\$19,557	\$933,757	\$19,555	\$1,595,682	\$252,796	\$56,997	\$10,605
Supplies and materials.....	\$80,170	\$1,689,568	\$46,715	\$3,238,179	\$923,497	\$103,876	\$31,383
Fuel.....	\$46,539	\$1,569,173	\$235,810	\$1,868,095	\$616,255	\$25,446	\$27,400
Purchased electric energy.....	\$80	\$61,367	\$5,568	\$127,015	\$7,830	.....	\$590
Contract work.....	\$26,721	\$269,835	\$12,261	\$2,876,158	\$2,066	.....	.....
Cost of buildings, machinery, and equipment erected or installed during the year.....	\$36,745	\$674,580	\$36,465	\$3,270,283	\$71,407	\$422,928	\$3,236
Buildings.....	\$2,554	\$95,485	\$4,964	\$820,378	\$4,560	\$25,804	\$1,468
Machinery and equipment.....	\$34,191	\$579,095	\$31,501	\$7,449,905	\$66,847	\$397,124	\$1,768
Number of man-hours worked by wage earners, total <sup>3</sup> .....	161,626	4,203,159	218,865	5,837,892	1,275,477	292,048	67,131
On active days <sup>7</sup> .....	161,626	4,192,599	214,425	5,721,345	1,264,546	292,048	67,131
On inactive days <sup>7</sup> .....	.....	10,560	4,460	116,547	10,931	.....	.....

See footnotes at end of table.

TABLE 51.—PRINCIPAL STATISTICS FOR THE NATURAL-GASOLINE INDUSTRY IN THE UNITED STATES,  
BY STATE: 1939<sup>1</sup>—Continued

[For producing operations only]

ITEM	Ohio	Oklahoma	Pennsylvania	Texas	West Virginia	Wyoming	Colorado, Michigan, Montana, and New York
Average number of wage earners on active days <sup>3</sup> .....	94	2,052	151	2,825	771	162	34
Full-time.....	78	1,986	97	2,625	491	151	22
Part-time.....	16	86	54	200	280	11	12
Average number of days plants were active <sup>8</sup> .....	319	355	329	345	361	353	362
Average hourly earning of wage earners.....	\$0.78	\$0.79	\$0.71	\$0.74	\$0.69	\$0.94	\$0.87
Callons of natural gasoline produced per man-hour <sup>9</sup> .....	46.3	101.9	56.9	130.3	36.6	105.1	81.7
Horsepower rating of power equipment.....	3,092	207,020	4,956	248,228	21,146	19,452	1,802
Per wage earner.....	37.7	102.6	37.0	89.7	27.3	123.9	53.0
Electric energy consumed (thousands of kw.-hrs.), total....	37	48,834	703	74,576	6,799	5,320	23
Purchased.....	3	7,055	250	13,738	835	.....	22
Generated by reporting companies.....	34	41,779	453	60,838	5,964	5,320	1

<sup>1</sup> Statistics cover natural-gasoline extraction plants (including recycling plants) which produced natural gasoline during the year, whether operated as independent units or at wellheads in conjunction with the production of natural gas. Statistics exclude natural-gasoline plants operated by concerns producing crude petroleum, natural gas, or natural gasoline or rendering oil- and gas-field services whose reports covering these activities indicated that neither the total value of products and services rendered, nor reported principal expenses, nor cost of buildings, machinery, and equipment during the year, nor cost of drilling and equipping oil wells, gas wells, and dry holes amounted to as much as \$2,500. Statistics for the producing plants thus excluded are shown only in table 86. Two large plants in Texas were under construction or undergoing major alteration during the year; statistics for these plants are included in table 19 with statistics for nonproducing crude-petroleum and natural-gas operations. Figures include statistics for recycling plants.

<sup>2</sup> Of this number, 10 companies operated plants in 2 of the designated States; 10, in 3 of the States; 5, in 4 of the States; 2, in 5 of the States; and 2, in 6 of the States.

<sup>3</sup> Excludes statistics for wage earners and wages for employees at certain plants that were operated in conjunction with oil and gas wells. The value of products of plants for which separate employment statistics were not obtained represents the following percentages of the value of products of all plants in the respective States: Pennsylvania, 6.6; Illinois, 3.7; Ohio and West Virginia, each 0.2; Arkansas and Louisiana, each 0.1; and all other States, each less than 0.05 percent.

<sup>4</sup> Includes statistics for 24 salaried employees, paid \$67,655, at central offices in Missouri and Oregon.

<sup>5</sup> Includes, in addition to the value of natural gasoline, the value of liquefied petroleum gases, other motor fuels, and other products of the industry, and the amount received for work performed for other establishments (see table 53).

<sup>6</sup> Profits or losses cannot be calculated by subtracting these expenses from the value of products shown. The designated expenses do not include certain other important items such as cost of natural gas treated, depreciation, taxes, interest, rent, insurance, and other costs. Moreover, the value of the natural gasoline, liquefied petroleum gases, and miscellaneous secondary products does not indicate the net amount received by the companies in the industry, for it does not take into account the natural-gas producers' share of the value of these products and of the residue gas sold.

<sup>7</sup> Active days are those on which the plants were producing; inactive days are those on which the plants were not producing.

<sup>8</sup> Computed by estimating total number of man shifts worked by wage earners on active days (computed separately for each plant by multiplying the reported number of days the plant was active by the average number of wage earners on active days for that plant) and dividing total man-shifts by the average number of wage earners on active days at all plants. For plants that were operated entirely by working proprietors the reported number of days the plant was active was multiplied by the total number of proprietors performing manual labor at the plant. The average number of days plants were active is thus more heavily weighted by plants that had the larger numbers of workers.

<sup>9</sup> Computed by dividing production of natural gasoline by the total number of man-hours worked by wage earners.

TABLE 52.—PRINCIPAL STATISTICS FOR THE NATURAL-GASOLINE INDUSTRY IN THE UNITED STATES,  
BY METHOD OF EXTRACTION: 1939<sup>1</sup>  
[For producing operations only]

ITEM	United States, total	Absorption	Compression <sup>2</sup>	Combination <sup>3</sup>	Charcoal	Not specified
Number of operating companies.....	295	134	154	28	5	10
Number of plants.....	734	368	303	44	8	11
Number of persons engaged, total.....	10,347	7,535	1,783	927	72	30
Wage earners (average for the year).....	8,332	5,949	1,551	743	63	26
Salaried employees.....	2,005	1,577	231	154	9	4
Proprietors and firm members (not applicable to corporations).....	10	9	1	.....	.....	.....
Performing manual labor about the plant.....	2	1	1	.....	.....	.....
Production of natural gasoline (gallons).....	2,141,778,805	1,662,428,801	271,354,001	199,378,613	5,557,728	3,061,662
Value of natural gasoline at plants.....	\$87,742,848	\$69,438,917	\$9,976,369	\$7,951,215	\$253,765	\$122,582
Value of all products.....	\$96,337,763	\$75,065,168	\$11,688,274	\$9,201,410	\$280,329	\$122,582
Principal expenses designated below, total.....	\$37,855,612	\$28,609,220	\$7,651,373	\$3,354,664	\$185,127	\$55,208
Wages.....	\$13,212,248	\$9,735,618	\$2,094,131	\$1,261,499	\$93,187	\$27,613
Salaries.....	\$5,051,639	\$3,819,433	\$821,630	\$669,539	\$12,368	\$6,971
Supplies and materials.....	\$8,652,948	\$5,897,925	\$2,004,502	\$744,077	\$27,025	\$9,419
Fuel.....	\$8,600,147	\$4,876,137	\$1,082,451	\$801,511	\$51,192	\$8,656
Purchased electric energy.....	\$354,702	\$313,158	\$18,979	\$23,059	\$1,357	\$149
Contract work.....	\$3,983,628	\$1,998,949	\$1,951,680	\$34,999	.....	.....
Cost of buildings, machinery, and equipment erected or installed during the year.....	\$13,029,885	\$9,648,635	\$2,608,837	\$567,049	\$5,289	\$75
Buildings.....	\$1,480,464	\$1,029,793	\$296,891	\$131,669	\$28	\$75
Machinery and equipment.....	\$11,549,421	\$8,618,842	\$2,309,946	\$435,380	\$5,263	.....
Number of man-hours worked by wage earners, total.....	16,633,710	12,278,390	2,702,520	1,475,609	129,013	48,178
On active days.....	16,428,445	12,137,282	2,643,932	1,471,082	127,971	48,178
On inactive days.....	205,265	141,108	58,588	4,527	1,042	.....
Average number of wage earners on active days.....	8,608	6,187	1,582	745	87	27
Full-time.....	7,711	5,762	1,182	667	80	20
Part-time.....	897	425	400	58	7	7
Average number of days plants were active.....	346	345	345	359	352	356
Average hourly earning of wage earners.....	\$0.79	\$0.79	\$0.77	\$0.85	\$0.72	\$0.68
Gallons of natural gasoline produced per man-hour.....	128.8	135.4	100.4	135.1	43.1	63.5
Horsepower rating of power equipment.....	772,302	564,759	113,351	91,834	1,466	890
Per wage earner.....	92.7	94.9	73.1	123.6	23.3	34.2
Electric energy consumed (thousands of kw.-hrs.), total.....	165,975	135,230	21,800	8,802	138	5
Purchased.....	37,012	32,800	1,273	2,892	42	5
Generated by reporting companies.....	128,963	102,430	20,527	5,910	96	.....

<sup>1</sup> For definition of the industry see table 51, footnote 1; for explanations of terms used see appropriate footnotes to table 51.

<sup>2</sup> Includes refrigeration and vacuum plants.

<sup>3</sup> Includes 1 vapor rectification plant.

<sup>4</sup> of this number, 14 companies operated both compression and absorption plants; 4, compression and combination plants; 2, absorption and charcoal plants; 2, absorption and combination plants; and 8, compression, absorption, and combination plants.

TABLE 53.—NATURAL GAS TREATED, DISPOSAL OF RESIDUE GAS, SHRINKAGE, AND QUANTITY AND VALUE OF ALL PRODUCTS AT NATURAL-GASOLINE PLANTS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

ITEM	United States	Arkansas	California	Illinois	Kansas	Kentucky	Louisiana
Natural gas treated (thousands of cubic feet), total...	2,200,167,408	18,906,648	376,721,543	2,510,723	142,884,262	36,808,165	121,557,109
Casinghead.....	1,306,737,068	18,617,568	375,395,560	2,425,127	18,332,536	3,670,000	77,508,588
"Dry".....	893,430,340	289,080	1,326,183	85,596	124,351,726	33,138,165	44,046,521
Residue gas (thousands of cubic feet), total.....	2,002,706,218	17,288,526	325,599,710	1,838,677	139,514,428	35,204,459	116,164,749
Used by operating concerns <sup>2</sup> .....	291,156,746	1,548,890	58,103,623	1,088,545	8,240,647	341,509	9,832,595
Returned to producers of gas treated.....	553,682,460	1,942,614	68,745,383	213,132	8,856,403	31,287,139	25,968,404
Blown to air.....	229,697,364	5,116,072	27,651,743	537,000	1,094,179	.....	24,353,388
Delivered to concerns other than producers of gas treated.....	928,169,648	8,658,952	173,198,661	.....	125,223,199	3,595,811	58,010,364
Indicated shrinkage (thousands of cubic feet) <sup>3</sup> .....	197,461,190	1,638,120	51,121,833	672,046	3,169,834	1,603,728	5,392,360
Percent of gas treated.....	9.0	8.7	13.6	26.8	2.2	4.4	4.4
Value of all products.....	\$96,337,763	\$939,575	\$36,132,917	\$287,536	\$2,140,420	\$706,139	\$3,482,080
Natural gasoline: <sup>4</sup>							
Gallons.....	2,141,778,805	24,837,570	604,596,961	4,105,510	81,166,104	7,698,708	93,389,376
Average yield per thousand cubic feet of gas treated (gallons).....	0.97	1.31	1.60	1.64	0.43	0.21	0.77
Value at plants.....	\$87,742,848	\$939,575	\$34,246,337	\$233,599	\$1,976,271	\$343,001	\$3,313,344
Average value per gallon (cents).....	4.1	3.8	5.7	5.7	3.2	4.5	3.5
Liquefied petroleum gases: <sup>5</sup>							
Gallons.....	385,131,471	.....	32,651,234	1,428,119	4,800,448	16,254,655	1,090
Value.....	\$7,156,473	.....	\$1,799,410	\$53,937	\$186,698	\$565,136	\$169
Motor fuel less natural gasoline entering into its production: <sup>6</sup>							
Gallons.....	13,765,126	.....	.....	.....	965,636	.....	3,218,563
Value.....	\$623,258	.....	.....	.....	\$23,251	.....	\$112,884
Naphtha, products of skimming operations, and other oils: <sup>7</sup>							
Gallons.....	13,943,475	.....	.....	.....	.....	.....	2,192,019
Value.....	\$662,207	.....	.....	.....	.....	.....	\$55,693
Electric energy generated and sold:							
Kilowatt-hours (thousands).....	3,668	.....	.....	.....	.....	.....	.....
Value.....	\$25,873	.....	.....	.....	.....	.....	.....
Receipts for work performed for others <sup>8</sup> .....	\$127,104	.....	\$87,170	.....	.....	.....	.....

See footnotes at end of table.

TABLE 53.—NATURAL GAS TREATED, DISPOSAL OF RESIDUE GAS, SHRINKAGE, AND QUANTITY AND VALUE OF ALL PRODUCTS AT NATURAL-GASOLINE PLANTS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>—Continued

ITEM	New Mexico	Ohio	Oklahoma	Pennsyl- vania	Texas	West Virginia	Wyoming	Colorado, Michigan, Montana, and New York
Natural gas treated (thousands of cubic feet), total...	88,565,287	32,823,135	232,862,928	27,069,436	956,152,846	135,634,435	18,557,412	9,313,679
Casinghead.....	63,678,283	32,080	210,439,157	9,291,821	493,965,153	18,836,279	15,147,780	1,197,398
"Dry".....	24,687,004	32,791,075	22,423,771	17,777,615	462,187,493	118,798,156	3,409,652	8,116,263
Residue gas (thousands of cubic feet), total.....	80,832,688	32,805,716	197,356,939	28,106,034	881,968,837	122,576,984	16,717,541	8,948,948
Used by operating concerns.....	20,204,054	177,913	51,759,579	1,375,735	132,939,436	7,243,543	1,944,408	255,969
Returned to producers of gas treated.....	1,621,776	32,427,803	77,097,798	20,336,051	177,427,327	97,911,106	11,019,045	845,479
Blown to air.....	34,900,675	.....	23,312,155	7,994	112,589,029	9,383	223,748	.....
Delivered to concerns other than producers of gas treated.....	24,106,183	.....	45,187,407	4,383,254	459,013,045	17,414,932	3,530,340	7,847,500
Indicated shrinkage (thousands of cubic feet) <sup>3</sup> .....	7,732,579	217,419	35,505,989	983,402	74,183,809	13,055,471	1,839,871	364,731
Percent of gas treated.....	8.7	0.7	15.2	3.6	7.8	9.6	9.9	3.9
Value of all products.....	\$1,765,123	\$367,956	\$18,392,872	\$593,872	\$28,252,067	\$3,395,688	\$1,567,890	\$313,828
Natural gasoline: <sup>4</sup>								
Gallons.....	54,372,551	7,476,827	428,107,437	12,444,056	760,792,694	46,619,404	30,684,892	5,486,915
Average yield per thousand cubic feet of gas treated (gallons).....	0.61	0.23	1.84	0.46	0.80	0.34	1.65	0.59
Value at plants.....	\$1,686,041	\$353,327	\$15,057,483	\$545,824	\$25,314,470	\$1,914,029	\$1,565,148	\$254,599
Average value per gallon (cents).....	3.1	4.7	3.5	4.4	3.3	4.1	5.1	4.6
Liquefied petroleum gases: <sup>5</sup>								
Gallons.....	3,720,929	.....	48,687,331	247,278	243,965,027	32,264,578	.....	1,132,582
Value.....	\$64,221	.....	\$814,583	\$34,929	\$2,359,076	\$1,468,913	.....	\$59,229
Motor fuel less natural gasoline entering into its production: <sup>6</sup>								
Gallons.....	52,710	219,989	2,195,497	201,874	6,716,078	194,779	.....	.....
Value.....	\$3,924	\$14,829	\$101,673	\$12,878	\$341,165	\$10,854	.....	.....
Naphtha, products of skimming operations, and other oils: <sup>7</sup>								
Gallons.....	.....	.....	5,683,309	.....	6,088,147	.....	.....	.....
Value.....	.....	.....	\$416,204	.....	\$190,310	.....	.....	.....
Electric energy generated and sold:								
Kilowatt-hours (thousands).....	1,015	.....	448	7	2,031	.....	169	.....
Value.....	\$10,937	.....	\$2,423	\$441	\$9,530	.....	\$2,542	.....
Receipts for work performed for others <sup>8</sup> .....	.....	.....	\$526	.....	\$37,516	\$1,892	.....	.....

<sup>1</sup> For definition of the industry see table 51, footnote 1.<sup>2</sup> Principally for fuel at plant and well operations.<sup>3</sup> Represents quantity of natural gas treated minus quantity of residue gas.<sup>4</sup> Excludes drip gasoline produced as a byproduct of oil- and gas-well operations.<sup>5</sup> Chiefly propane, butane, and propane-butane mixtures.<sup>6</sup> Excludes other products of natural-gasoline plants listed in this table.<sup>7</sup> Includes scrubber oil, distillate, kerosene, gas oil, and mineral seal oil.<sup>8</sup> Includes the following: Laboratory services, reported by 2 plants; reducing crude oil, 1; operation of dehydration plant, 1; boosting, 4; repressurizing, 1; compressing gas, 1; maintenance and repair of gas gathering system, other oil-field pipe-line and miscellaneous work, and relocation of crude-oil topping plant, 1; and receipts for steam sold, 2.TABLE 54.—NATURAL GAS TREATED, DISPOSAL OF RESIDUE GAS, SHRINKAGE, AND QUANTITY AND VALUE OF ALL PRODUCTS AT NATURAL-GASOLINE PLANTS IN THE UNITED STATES, BY METHOD OF EXTRACTION: 1939<sup>1</sup>

ITEM	United States, total	Absorption	Compression <sup>2</sup>	Combination <sup>3</sup>	Charcoal	Not specified
Natural gas treated (thousands of cubic feet), total.....	2,200,167,408	1,885,593,922	174,549,137	114,380,151	23,865,625	1,778,573
Casinghead.....	1,306,737,068	1,073,926,278	131,154,814	97,251,872	2,844,000	1,580,104
"Dry".....	893,430,340	811,667,644	43,394,323	17,128,279	21,021,625	218,469
Residue gas (thousands of cubic feet).....	2,002,706,218	1,734,620,548	144,191,821	98,971,961	23,427,093	1,494,795
Used by operating concerns.....	291,156,748	238,330,970	29,230,915	22,779,778	300,022	515,061
Returned to producers of gas treated.....	553,682,460	428,924,822	81,029,491	25,448,172	19,531,260	748,715
Blown to air.....	229,897,364	200,919,058	8,204,355	20,439,268	.....	134,685
Delivered to concerns other than producers of gas treated.....	928,169,648	868,445,698	25,727,080	30,304,745	3,595,811	96,334
Indicated shrinkage (thousands of cubic feet).....	197,461,190	150,973,374	30,357,316	15,408,190	438,532	283,778
Percent of gas treated.....	9.0	8.0	17.4	13.5	1.8	16.0
Value of all products.....	\$96,337,763	\$75,065,168	\$11,688,274	\$9,201,410	\$260,329	\$122,582
Natural gasoline:						
Gallons.....	2,141,778,805	1,862,426,801	271,354,001	199,378,613	5,557,728	3,061,662
Average yield per M cu. ft. of gas treated, (gallons).....	0.97	0.88	1.55	1.74	0.23	1.72
Value at plants.....	\$87,742,848	\$69,438,917	\$9,976,369	\$7,951,215	\$253,785	\$122,582
Average value per gallon (cents).....	4.1	4.2	3.7	4.0	4.6	4.0
Liquefied petroleum gases:						
Gallons.....	385,131,471	272,082,628	43,773,941	68,849,329	415,573	.....
Value.....	\$7,156,473	\$4,955,153	\$1,346,787	\$847,969	\$6,584	.....
Motor fuel less natural gasoline entering into its production:						
Gallons.....	13,765,128	5,909,414	6,949,127	906,585	.....	.....
Value.....	\$623,258	\$220,070	\$362,069	\$41,119	.....	.....
Naphtha, products of skimming operations, and other oils:						
Gallons.....	13,943,475	6,837,615	6,440	7,099,420	.....	.....
Value.....	\$662,207	\$337,494	\$161	\$324,552	.....	.....
Electric energy generated and sold:						
Kilowatt-hours (thousands).....	3,868	3,621	47	.....	.....	.....
Value.....	\$25,873	\$24,877	\$698	.....	.....	.....
Receipts for work performed for others.....	\$127,104	\$86,657	\$1,682	\$36,555	.....	.....

<sup>1</sup> For definition of the industry see table 51, footnote 1; for explanations of terms used see appropriate footnotes to table 53.<sup>2</sup> Includes refrigeration and vacuum plants.<sup>3</sup> Includes 1 vapor rectification plant.



TABLE 55.—NUMBER OF WAGE EARNERS AT NATURAL-GASOLINE PLANTS IN THE UNITED STATES, BY METHOD OF EXTRACTION, BY STATE, AND BY MONTH: 1939<sup>1</sup>

[For producing operations only]

METHOD OF EXTRACTION AND STATE	Average for the 12 months	NUMBER RECEIVING PAY DURING PAY-ROLL PERIOD ENDING NEAREST THE 15TH OF THE MONTH											
		Janu- ary	Febru- ary	March	April	May	June	July	August	Septem- ber	Octo- ber	Novem- ber	Decem- ber
United States, total.....	8,332	8,093	8,074	8,290	8,316	8,338	8,438	8,486	8,508	8,378	8,351	8,368	8,352
Method of extraction:													
Absorption.....	5,949	5,778	5,737	5,873	5,858	5,907	6,056	6,124	6,144	6,004	5,959	5,969	5,983
Compression <sup>2</sup> .....	1,551	1,483	1,517	1,590	1,624	1,599	1,546	1,497	1,511	1,520	1,561	1,592	1,569
Combination <sup>3</sup> .....	743	739	729	738	744	742	754	776	771	761	738	714	707
Charcoal.....	63	67	65	65	66	64	56	63	56	65	66	66	66
Not specified.....	28	26	26	26	26	26	26	26	26	26	27	27	27
State:													
Arkansas.....	89	87	84	92	93	84	92	92	90	90	87	90	86
California.....	1,441	1,396	1,402	1,407	1,410	1,400	1,416	1,469	1,489	1,478	1,487	1,469	1,490
Illinois.....	89	45	58	70	70	68	73	71	78	62	64	70	97
Kansas.....	218	226	226	225	226	224	227	226	219	205	207	205	195
Kentucky.....	63	59	56	55	55	61	63	64	70	73	69	70	67
Louisiana.....	349	306	315	310	293	317	365	371	395	353	374	400	391
New Mexico.....	138	135	133	142	137	139	139	146	146	136	130	136	134
Ohio.....	82	79	79	80	80	79	82	82	82	82	83	80	94
Oklahoma.....	2,018	2,091	2,052	2,097	2,058	2,074	2,080	2,079	2,020	1,970	1,927	1,927	1,867
Pennsylvania.....	134	131	131	134	133	135	131	117	129	134	141	142	150
Texas.....	2,788	2,586	2,605	2,713	2,815	2,788	2,834	2,834	2,862	2,821	2,783	2,786	2,784
West Virginia.....	774	745	733	758	746	772	768	743	747	794	836	833	818
Wyoming.....	157	174	187	173	166	165	153	154	145	145	149	146	146
Colorado, Michigan, Montana, and New York.....	34	33	33	34	36	32	35	36	34	33	34	34	35

<sup>1</sup> For definition of the industry see table 51, footnote 1.<sup>2</sup> Includes refrigeration and vacuum plants.<sup>3</sup> Includes 1 vapor rectification plant.TABLE 56.—QUANTITY OF FUELS CONSUMED BY THE NATURAL-GASOLINE INDUSTRY IN THE UNITED STATES, BY METHOD OF EXTRACTION, BY STATE, AND BY KIND OF FUEL: 1939<sup>1</sup>

[For producing operations only]

METHOD OF EXTRACTION AND STATE	Bituminous coal (tons of 2,000 pounds) <sup>2</sup>	Fuel oils (barrels of 42 gallons)	Gasoline and kerosene (gallons)	Natural gas (thousands of cubic feet)
United States, total.....	20,130	53,743	38,699	177,769,765
Method of extraction:				
Absorption.....	.....	34,337	20,950	144,637,800
Compression <sup>3</sup> .....	20,130	19,306	55	15,807,724
Combination <sup>4</sup> .....	.....	100	17,694	16,683,020
Charcoal.....	.....	.....	.....	311,303
Not specified.....	.....	.....	.....	329,918
State:				
Arkansas.....	.....	.....	.....	1,659,205
California.....	.....	25,219	7,000	24,991,947
Illinois.....	371	.....	.....	227,632
Kansas.....	.....	3,245	12,950	3,303,481
Kentucky.....	.....	.....	.....	316,717
Louisiana.....	.....	.....	.....	5,058,615
New Mexico.....	.....	.....	.....	20,085,001
Ohio.....	.....	.....	.....	212,543
Oklahoma.....	.....	.....	.....	35,247,652
Pennsylvania.....	.....	739	55	860,670
Texas.....	.....	24,540	17,694	81,162,258
West Virginia.....	19,759	.....	.....	3,376,802
Wyoming.....	.....	.....	.....	950,325
Colorado, Michigan, Montana, and New York.....	.....	.....	1,000	316,717

<sup>1</sup> For definition of the industry see table 51, footnote 1.<sup>2</sup> No anthracite was reported consumed by the industry.<sup>3</sup> Includes refrigeration and vacuum plants.<sup>4</sup> Includes 1 vapor rectification plant.

## NATURAL GASOLINE

211

TABLE 57.—NUMBER AND RATED CAPACITY OF PRIME MOVERS AND ELECTRIC MOTORS AT NATURAL-GASOLINE PLANTS IN THE UNITED STATES, BY METHOD OF EXTRACTION AND BY STATE: 1939<sup>1</sup>

[For producing operations only]

METHOD OF EXTRACTION AND STATE	PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY										ELECTRIC MOTORS DRIVEN BY ENERGY GENERATED BY REPORTING COMPANIES	
	Aggregate horsepower	Total horse- power	Prime movers						Electric motors driven by purchased energy			
			Driving generators		Not driving generators		Ordinarily idle					
			Number	Horse- power	Number	Horse- power	Number	Horse- power	Number	Horsepower	Number	Horsepower
United States, total.....	772,302	757,583	461	54,860	6,037	702,723	945	94,591	632	14,719	1,452	26,493
Method of extraction:												
Absorption.....	564,759	551,227	338	42,806	4,355	508,421	702	71,035	562	13,532	1,133	21,604
Compression <sup>2</sup> .....	113,351	112,666	87	8,267	925	104,599	111	11,186	25	485	280	3,543
Combination <sup>3</sup> .....	91,834	91,188	30	3,635	710	87,553	131	12,310	40	648	59	1,346
Charcoal.....	1,468	1,412	6	152	28	1,280	1	60	5	58	.....	.....
Not specified.....	890	890	.....	.....	19	890	.....	.....	.....	.....	.....	.....
State:												
Arkansas.....	6,798	6,796	4	306	58	6,491	9	345	.....	.....	1	8
California.....	191,585	184,417	25	1,715	1,458	182,702	222	26,627	251	7,168	17	224
Illinois.....	4,714	4,834	10	80	49	4,554	17	676	3	80	6	36
Kansas.....	17,518	17,335	23	1,592	152	15,743	19	879	10	183	53	1,379
Kentucky.....	2,248	2,185	3	90	15	2,095	2	110	5	63	.....	.....
Louisiana.....	29,887	29,696	23	2,268	305	27,428	58	2,523	11	191	43	817
New Mexico.....	13,858	13,858	14	2,285	111	11,573	15	1,125	.....	.....	60	862
Ohio.....	3,092	3,089	4	99	36	2,990	11	905	3	3	.....	.....
Oklahoma.....	207,020	205,738	129	16,617	1,461	189,119	241	29,781	73	1,284	503	7,957
Pennsylvania.....	4,956	4,699	7	1,080	130	3,619	11	535	30	257	29	581
Texas.....	248,228	242,905	176	24,723	1,940	216,182	306	25,764	236	5,323	610	13,091
West Virginia.....	21,146	20,996	32	1,781	216	19,235	29	3,756	5	150	79	1,063
Wyoming.....	19,452	19,452	9	2,220	88	17,232	4	1,550	.....	.....	51	475
Colorado, Michigan, Montana, and New York..	1,802	1,785	2	25	20	1,760	1	15	5	17	.....	.....

<sup>1</sup> For definition of the industry see table 51, footnote 1. Figures represent equipment in use or available for use at the end of the year. <sup>2</sup> Includes refrigeration and vacuum plants. <sup>3</sup> Includes 1 vapor rectification plant.

TABLE 58.—SELECTED STATISTICS FOR INCORPORATED AND FOR UNINCORPORATED OPERATING COMPANIES IN THE NATURAL-GASOLINE INDUSTRY IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

[For producing operations only]

STATE AND TYPE OF OWNERSHIP	Number of operating companies	Number of plants	Production of natural gasoline (gallons)	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....	295	734	2,141,778,805	\$96,337,763	<sup>2</sup> 10,347	8,332	<sup>2</sup> 2,005	10	\$13,212,248	<sup>2</sup> \$5,051,939
Incorporated.....	210	637	2,102,642,698	\$95,009,849	<sup>2</sup> 10,119	8,144	<sup>2</sup> 1,975	.....	12,982,197	<sup>2</sup> 4,968,078
Unincorporated.....	85	97	39,136,107	1,327,914	228	188	30	10	230,051	33,861
Arkansas, total.....	7	9	24,837,570	939,575	103	89	14	.....	138,166	25,218
Incorporated.....	5	7	24,837,570	939,575	103	89	14	.....	138,166	25,218
Unincorporated.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....
California, total.....	37	96	604,596,961	36,132,917	2,026	1,441	585	.....	2,735,037	1,640,030
Incorporated.....	35	94	604,596,961	36,132,917	2,026	1,441	585	.....	2,735,037	1,640,030
Unincorporated.....	2	2	.....	.....	.....	.....	.....	.....	.....	.....
Illinois, total.....	22	53	4,105,510	287,536	73	69	4	.....	82,138	7,357
Incorporated.....	13	40	3,905,471	277,738	69	65	4	.....	79,475	7,357
Unincorporated.....	9	13	200,039	9,798	4	4	.....	.....	2,663	.....
Kansas <sup>3</sup> .....	11	18	61,186,104	2,140,420	253	218	35	.....	321,482	65,439
Kentucky <sup>3</sup> .....	4	6	7,698,708	708,139	86	83	3	.....	85,184	7,943
Louisiana <sup>3</sup> .....	18	29	93,389,378	3,462,080	431	349	82	.....	496,068	349,325
New Mexico <sup>3</sup> .....	5	6	54,372,551	1,765,123	158	138	20	.....	231,682	40,035
Ohio, total.....	7	12	7,476,627	367,956	92	82	10	.....	125,986	19,557
Incorporated.....	6	11	7,476,627	367,956	92	82	10	.....	125,986	19,557
Unincorporated.....	1	1	.....	.....	.....	.....	.....	.....	.....	.....
Oklahoma, total.....	55	139	428,107,437	16,392,872	2,424	2,018	403	3	3,316,033	933,757
Incorporated.....	41	124	422,617,564	16,208,978	2,378	1,975	401	.....	3,257,291	930,935
Unincorporated.....	14	15	5,489,873	185,896	46	43	2	3	58,742	2,822
Pennsylvania, total.....	70	107	12,444,056	593,872	147	134	12	1	155,488	19,555
Incorporated.....	23	53	11,552,033	548,269	133	121	12	.....	143,419	19,555
Unincorporated.....	47	54	892,023	47,603	14	13	.....	1	12,067	.....
Texas, total.....	90	169	760,792,694	28,252,087	3,441	2,766	689	6	4,325,756	1,595,682
Incorporated.....	84	163	748,905,627	27,821,617	3,348	2,699	647	.....	4,245,569	1,522,401
Unincorporated.....	6	6	13,887,067	430,450	93	67	22	6	80,187	73,281
West Virginia, total.....	24	78	46,619,404	3,395,888	894	774	120	.....	680,045	232,796
Incorporated.....	21	75	45,788,100	3,357,319	886	767	119	.....	669,045	231,798
Unincorporated.....	3	3	831,304	38,569	8	7	1	.....	11,000	1,000
Wyoming <sup>3</sup> .....	5	7	30,684,892	1,567,690	173	157	16	.....	274,322	36,987
Colorado, Michigan, Montana, and New York, total.....	5	5	5,486,915	313,828	42	34	8	.....	44,863	10,605
Incorporated.....	4	4	.....	.....	.....	.....	.....	.....	.....	.....
Unincorporated.....	1	1	5,486,915	313,828	42	34	8	.....	44,863	10,605

<sup>1</sup> For definition of the industry see table 51, footnote 1. <sup>2</sup> Includes statistics for 24 salaried employees paid \$67,655 at central offices in Missouri and Oregon. <sup>3</sup> Incorporated only; no unincorporated operating companies were reported.

TABLE 59.—SELECTED STATISTICS FOR NATURAL-GASOLINE PLANTS IN THE UNITED STATES, CLASSIFIED BY VALUE OF PRODUCTS AND BY STATE: 1939<sup>1</sup>

[For producing operations only]

STATE AND VALUE OF PRODUCTS	Number of plants	Production of natural gasoline (gallons)	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.....	734	2,141,778,805	\$98,337,763	<sup>2</sup> 10,347	8,332	<sup>2</sup> 2,005	10	\$13,212,248	<sup>2</sup> \$5,051,939
\$1-\$19,999.....	264	32,863,977	1,208,664	873	628	41	4	843,664	57,014
\$20,000-\$49,999.....	87	79,284,494	2,947,077	789	691	97	1	1,082,754	205,713
\$50,000-\$99,999.....	86	158,237,283	6,337,142	1,148	1,017	130	1	1,582,274	278,146
\$100,000-\$249,999.....	125	492,357,235	20,214,188	2,525	2,240	285	.....	3,674,890	668,789
\$250,000-\$499,999.....	57	452,870,583	20,644,408	1,808	1,572	234	.....	2,654,139	584,086
\$500,000-\$999,999.....	32	519,521,181	21,857,280	1,154	1,005	149	.....	1,701,328	443,195
\$1,000,000-\$2,499,999.....	14	334,994,866	19,128,781	732	643	89	.....	1,185,105	240,168
Unclassified.....	69	71,669,206	4,002,223	<sup>2</sup> 1,320	336	<sup>2</sup> 980	4	528,094	<sup>2</sup> 2,594,828
Arkansas, total.....	9	24,837,570	939,575	103	89	14	.....	138,166	25,218
\$1-\$19,999.....	2	887,368	36,097	7	6	1	.....	6,016	2,100
\$20,000-\$49,999.....	1	.....	.....	.....	.....	.....	.....	.....	.....
\$50,000-\$99,999.....	4	23,970,202	903,478	96	83	13	.....	132,150	23,118
\$100,000-\$249,999.....	1	.....	.....	.....	.....	.....	.....	.....	.....
\$250,000-\$499,999.....	1	.....	.....	.....	.....	.....	.....	.....	.....
California, total.....	96	804,598,961	36,132,917	2,026	1,441	585	.....	2,735,037	1,640,030
\$1-\$19,999.....	7	893,586	53,219	19	16	3	.....	28,283	1,973
\$20,000-\$49,999.....	9	5,951,913	310,075	69	64	5	.....	111,290	13,663
\$50,000-\$99,999.....	11	14,617,549	856,512	102	82	20	.....	157,099	41,227
\$100,000-\$249,999.....	23	81,875,735	3,729,536	271	239	32	.....	452,044	82,846
\$250,000-\$499,999.....	16	95,989,818	5,747,803	363	311	52	.....	618,931	170,255
\$500,000-\$999,999.....	11	141,678,295	7,606,984	243	230	14	.....	430,108	42,858
\$1,000,000-\$2,499,999.....	12	252,293,327	15,886,656	468	410	56	.....	767,761	174,998
Unclassified.....	7	31,096,736	1,942,132	493	89	403	.....	169,521	1,112,210
Illinois, total.....	53	4,105,510	287,536	73	69	4	.....	82,136	7,357
\$1-\$19,999.....	25	2,788,351	211,201	54	50	4	.....	58,918	7,357
\$100,000-\$249,999.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Unclassified.....	27	1,337,159	76,335	19	19	.....	.....	23,220	.....
Kansas, total.....	18	61,166,104	2,140,420	253	218	35	.....	321,482	65,439
\$1-\$19,999.....	5	2,180,849	63,456	25	19	6	.....	27,874	8,674
\$20,000-\$49,999.....	3	4,541,515	112,713	26	22	4	.....	32,392	7,561
\$50,000-\$99,999.....	3	5,142,319	207,031	42	35	7	.....	52,513	10,466
\$100,000-\$249,999.....	5	49,301,421	1,757,220	158	142	16	.....	208,703	33,968
\$250,000-\$499,999.....	2	.....	.....	2	.....	2	.....	.....	4,851
Unclassified.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kentucky, total.....	6	7,698,708	706,139	66	63	3	.....	85,184	7,943
\$1-\$19,999.....	2	627,412	27,039	5	4	1	.....	6,913	263
\$20,000-\$49,999.....	1	.....	.....	.....	.....	.....	.....	.....	.....
\$50,000-\$99,999.....	1	7,071,296	679,100	61	59	2	.....	78,271	7,680
\$100,000-\$249,999.....	1	.....	.....	.....	.....	.....	.....	.....	.....
\$250,000-\$499,999.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Louisiana, total.....	29	93,389,376	3,482,080	431	349	82	.....	496,068	349,325
\$1-\$19,999.....	5	803,457	32,217	25	24	1	.....	29,479	410
\$20,000-\$49,999.....	10	10,149,574	371,278	108	97	11	.....	152,665	25,024
\$50,000-\$99,999.....	5	11,631,899	426,216	49	45	4	.....	69,792	8,760
\$100,000-\$249,999.....	6	23,670,070	923,744	131	116	15	.....	149,015	45,878
\$250,000-\$499,999.....	2	47,134,386	1,726,625	77	67	10	.....	95,129	25,167
\$500,000-\$999,999.....	1	.....	.....	41	.....	41	.....	.....	244,086
Unclassified.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Mexico, total.....	6	54,372,551	1,765,123	158	138	20	.....	231,682	40,033
\$100,000-\$249,999.....	3	19,625,391	662,309	60	54	6	.....	96,599	13,041
\$250,000-\$499,999.....	2	34,747,160	1,102,814	98	84	14	.....	135,083	26,992
\$500,000-\$999,999.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Ohio, total.....	12	7,476,627	367,956	92	82	10	.....	125,988	19,557
\$1-\$19,999.....	5	80,388	4,547	3	2	1	.....	970	56
\$20,000-\$49,999.....	3	1,601,542	69,186	17	16	1	.....	23,334	2,280
\$50,000-\$99,999.....	4	5,794,697	294,221	64	64	.....	.....	101,682	.....
Unclassified.....	.....	.....	.....	8	.....	8	.....	.....	17,221
Oklahoma, total.....	139	428,107,437	16,392,872	2,424	2,018	403	3	3,316,033	933,757
\$1-\$19,999.....	43	8,315,596	271,498	187	123	13	1	165,375	19,360
\$20,000-\$49,999.....	21	19,951,430	701,238	180	175	17	.....	270,262	36,554
\$50,000-\$99,999.....	16	28,570,546	1,102,949	199	175	26	.....	255,384	48,418
\$100,000-\$249,999.....	32	129,060,355	5,049,431	807	736	71	.....	1,241,552	156,169
\$250,000-\$499,999.....	11	98,523,162	3,956,229	405	364	42	.....	625,565	96,264
\$500,000-\$999,999.....	3	116,480,446	4,090,552	338	296	42	.....	518,543	80,247
\$1,000,000-\$2,499,999.....	1	29,305,902	1,218,947	347	153	192	2	239,352	496,945
Unclassified.....	12	.....	.....	147	134	12	.....	155,486	19,555
Pennsylvania, total.....	107	12,444,056	593,672	147	134	12	.....	155,486	19,555
\$1-\$19,999.....	87	3,474,723	157,030	91	88	2	1	92,196	2,550
\$20,000-\$49,999.....	5	.....	.....	.....	.....	.....	.....	.....	.....
\$50,000-\$99,999.....	1	8,679,899	412,378	41	40	1	.....	54,366	2,580
\$100,000-\$249,999.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Unclassified.....	13	289,434	24,464	15	6	9	.....	8,924	14,425
Texas, total.....	169	760,792,694	28,252,087	3,441	2,766	669	6	4,325,756	1,595,682
\$1-\$19,999.....	18	5,250,715	145,336	88	72	12	2	85,701	18,681
\$20,000-\$49,999.....	27	27,428,502	911,043	275	223	51	1	356,887	107,133
\$50,000-\$99,999.....	33	72,063,426	2,402,048	507	447	59	1	871,810	139,006
\$100,000-\$249,999.....	48	218,231,653	7,888,988	1,000	864	136	.....	1,358,442	315,500
\$250,000-\$499,999.....	21	192,087,083	7,609,154	742	634	108	.....	1,019,495	228,979
\$500,000-\$999,999.....	12	226,093,342	8,557,155	546	458	90	.....	738,344	304,497
Unclassified.....	10	19,639,973	740,345	283	68	213	2	87,077	483,866

See footnotes at end of table.

TABLE 59.—SELECTED STATISTICS FOR NATURAL-GASOLINE PLANTS IN THE UNITED STATES, CLASSIFIED BY VALUE OF PRODUCTS AND BY STATE: 1939<sup>1</sup>—Continued

[For producing operations only]

STATE AND VALUE OF PRODUCTS	Number of plants	Production of natural gasoline (gallons)	Value of all products	NUMBER OF PERSONS ENGAGED				Wages	Salaries
				Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members		
West Virginia, total.....	78	46,819,404	\$3,395,688	894	774	120	.....	\$880,045	\$232,796
\$1-\$19,999.....	60	10,131,352	393,874	451	448	3	.....	376,403	5,410
\$20,000-\$49,999.....	6	4,814,368	187,651	50	47	3	.....	68,593	5,364
\$50,000-\$99,999.....	5	7,310,800	355,837	72	71	1	.....	100,413	3,980
\$100,000-\$249,999.....	2	24,562,864	2,458,526	241	208	33	.....	334,636	75,368
\$250,000-\$499,999.....	3								
\$500,000-\$999,999.....	2								
Unclassified.....	.....	.....	.....	80	.....	80	.....	.....	142,694
Wyoming, total.....	7	30,684,892	1,567,690	173	157	16	.....	274,322	36,987
\$1-\$19,999.....	2	706,975	52,371	23	20	3	.....	33,890	5,971
\$20,000-\$49,999.....	1								
\$50,000-\$99,999.....	2								
\$100,000-\$249,999.....	1	29,977,917	1,515,319	149	137	12	.....	240,432	27,866
\$1,000,000-\$2,499,999.....	1								
Unclassified.....	.....	.....	.....	1	.....	1	.....	.....	3,150
Colorado, Michigan, Montana, and New York, total.....	5	5,486,915	313,828	42	34	8	.....	44,883	10,605
\$1-\$19,999.....	3	5,486,915	313,828	35	34	1	.....	44,883	2,900
\$50,000-\$99,999.....	1								
\$100,000-\$249,999.....	1								
Unclassified.....	.....	.....	.....	7	.....	7	.....	.....	7,705

<sup>1</sup> For definition of the industry see table 51, footnote 1. Each report for a single plant was classified by value of all products; reports for more than 1 plant and reports for central offices reported separately from their associated plants are included in "Unclassified."

<sup>2</sup> Includes statistics for 24 salaried employees, paid \$67,655 at central offices in Missouri and Oregon.

TABLE 60.—SELECTED STATISTICS FOR NATURAL-GASOLINE PLANTS IN THE UNITED STATES, CLASSIFIED BY QUANTITY OF NATURAL GASOLINE PRODUCED AND BY STATE: 1939<sup>1</sup>

[For producing operations only]

STATE AND GALLONS OF NATURAL GASOLINE	Number of plants	Production of natural gasoline (gallons)	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.....	734	2,141,778,805	\$66,337,763	<sup>2</sup> 10,347	8,332	<sup>2</sup> 2,005	10	\$13,212,248	<sup>2</sup> \$5,051,939
1-24,999.....	102	892,102	55,780	42	41	.....	1	28,024	.....
25,000-99,999.....	57	2,928,984	166,683	128	122	6	.....	125,252	2,821
100,000-249,999.....	49	7,996,281	422,868	249	239	9	.....	264,260	17,982
250,000-499,999.....	50	17,713,765	801,026	463	430	33	.....	435,849	46,739
500,000-999,999.....	66	47,430,394	2,398,287	625	546	75	.....	802,243	166,812
1,000,000-1,999,999.....	88	186,308,975	6,146,257	1,118	988	130	.....	1,583,719	270,070
2,000,000-3,999,999.....	100	288,452,244	12,803,772	1,648	1,473	175	.....	2,347,011	427,115
4,000,000-6,999,999.....	66	354,179,447	15,578,500	1,691	1,485	206	.....	2,544,317	512,129
7,000,000-9,999,999.....	29	244,867,003	10,473,544	820	720	100	.....	1,238,630	229,455
10,000,000 and over.....	54	969,328,218	43,487,593	<sup>2</sup> 2,244	1,953	<sup>2</sup> 291	.....	3,314,849	783,888
Unclassified.....	73	81,681,412	4,003,453	1,319	335	2980	4	528,094	<sup>2</sup> 2,594,628
Arkansas, total.....	9	24,837,570	939,575	103	89	14	.....	138,166	25,218
1-24,999.....	2	867,368	36,097	7	6	1	.....	6,016	2,100
500,000-999,999.....	1								
1,000,000-1,999,999.....	4								
2,000,000-3,999,999.....	1	23,970,202	903,478	96	83	13	.....	132,150	23,118
10,000,000 and over.....	1								
California, total.....	96	604,596,961	36,132,917	2,026	1,441	585	.....	2,735,037	1,640,030
1-24,999.....	2	97,506	7,886	4	4	.....	.....	6,822	.....
25,000-99,999.....	2								
100,000-249,999.....	1								
250,000-499,999.....	2	798,080	45,333	15	12	3	.....	21,461	1,973
500,000-999,999.....	11								
1,000,000-1,999,999.....	12	7,783,252	413,164	82	76	6	.....	134,130	16,101
2,000,000-3,999,999.....	20	18,469,675	1,087,075	130	109	21	.....	196,938	47,789
4,000,000-6,999,999.....	11	55,203,437	3,470,828	235	205	30	.....	395,901	73,904
7,000,000-9,999,999.....	8	58,655,555	3,724,824	249	209	40	.....	414,053	131,952
10,000,000 and over.....	20	86,055,311	3,557,002	167	151	16	.....	297,814	48,889
Unclassified.....	7	366,459,211	21,784,875	652	586	66	.....	1,096,597	207,212
Illinois, total.....	53	31,096,738	1,942,132	492	89	403	.....	169,521	1,112,210
1-24,999.....	18	148,601	9,711	5	5	.....	.....	1,568	.....
25,000-99,999.....	4								
100,000-249,999.....	2								
250,000-499,999.....	1	2,399,020	190,028	45	41	4	.....	53,589	7,357
1,000,000-1,999,999.....	1								
Unclassified.....	27	1,337,159	76,335	19	19	.....	.....	23,220	.....
Kansas, total.....	18	61,166,104	2,140,420	253	218	35	.....	321,482	65,439
100,000-249,999.....	1	2,180,849	63,456	24	18	6	.....	27,874	8,574
250,000-499,999.....	2								
500,000-999,999.....	2								
1,000,000-1,999,999.....	5	7,562,617	316,267	75	63	12	.....	86,937	18,230
2,000,000-3,999,999.....	4								
4,000,000-6,999,999.....	2	10,747,664	401,348	57	52	5	.....	84,090	11,996
10,000,000 and over.....	2	40,674,674	1,359,349	95	85	10	.....	120,561	21,788
Unclassified.....	.....	.....	.....	2	.....	2	.....	.....	4,851

See footnotes at end of table.

TABLE 60.—SELECTED STATISTICS FOR NATURAL-GASOLINE PLANTS IN THE UNITED STATES, CLASSIFIED BY QUANTITY OF NATURAL GASOLINE PRODUCED AND BY STATE: 1939<sup>1</sup>—Continued  
[For producing operations only]

STATE AND GALLONS OF NATURAL GASOLINE	Number of plants	Production of natural gasoline (gallons)	Value of all products	NUMBER OF PERSONS ENGAGED				Wages	Salaries
				Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members		
Kentucky, total.....	6	7,698,708	\$ 708,139	66	63	3	.....	\$ 85,184	\$ 7,943
500,000-999,999.....	2	2,508,973	229,344	39	36	3	.....	49,288	7,943
1,000,000-1,999,999.....	1								
4,000,000-6,999,999.....	1	5,189,735	476,795	27	27	.....	.....	35,896	.....
Unclassified.....	2								
Louisiana, total.....	29	93,389,376	3,482,080	431	349	82	.....	496,068	349,325
25,000-99,999.....	3								
100,000-249,999.....	1	803,457	32,217	25	24	1	.....	29,479	410
250,000-499,999.....	1								
500,000-999,999.....	5	3,475,545	157,491	62	55	7	.....	79,175	14,215
1,000,000-1,999,999.....	7	10,255,529	381,522	63	58	5	.....	96,966	13,269
2,000,000-3,999,999.....	7	21,950,999	913,315	122	109	13	.....	135,254	37,674
4,000,000-6,999,999.....	2								
7,000,000-9,999,999.....	1	56,903,946	2,017,535	118	103	15	.....	155,194	39,671
10,000,000 and over.....	2								
Unclassified.....	.....	.....	.....	41	.....	41	.....	.....	244,086
New Mexico, total.....	6	54,372,551	1,765,123	158	138	20	.....	231,682	40,033
4,000,000-6,999,999.....	4	54,372,551	1,765,123	158	138	20	.....	231,682	40,033
10,000,000 and over.....	2								
Ohio, total.....	12	7,476,627	387,958	92	82	10	.....	125,986	19,557
1-24,999.....	4	23,337	1,827	1	1	.....	.....	544	.....
25,000-99,999.....	1								
250,000-499,999.....	1	1,653,593	72,108	19	17	2	.....	23,760	2,336
500,000-999,999.....	2								
1,000,000-1,999,999.....	4	5,794,697	294,221	64	64	.....	.....	101,682	.....
Unclassified.....	.....	.....	.....	8	.....	8	.....	.....	17,221
Oklahoma, total.....	139	428,107,437	16,392,872	2,424	2,018	403	3	3,316,033	933,757
1-24,999.....	7	98,095	6,300	6	6	.....	.....	8,405	.....
25,000-99,999.....	11	622,364	23,061	24	22	2	.....	28,738	905
100,000-249,999.....	14	2,438,325	204,872	67	60	6	.....	89,011	13,372
250,000-499,999.....	11	4,249,059	258,643	80	87	13	1	77,508	15,242
500,000-999,999.....	18	13,607,224	519,079	137	122	15	.....	175,328	33,589
1,000,000-1,999,999.....	15	20,093,160	913,975	198	180	18	.....	295,532	36,586
2,000,000-3,999,999.....	24	72,743,510	2,942,417	468	424	42	.....	878,077	92,919
4,000,000-6,999,999.....	13	69,215,341	2,828,232	425	385	40	.....	680,438	93,628
7,000,000-9,999,999.....	7	59,057,233	2,040,188	225	205	20	.....	363,208	45,504
10,000,000 and over.....	7	156,677,224	5,437,158	449	394	55	.....	678,442	105,087
Unclassified.....	12	29,305,902	1,218,947	347	153	192	2	239,352	496,945
Pennsylvania, total.....	107	12,444,056	595,872	147	134	12	1	155,486	19,555
1-24,999.....	54	413,304	23,009	22	21	.....	1	13,255	.....
25,000-99,999.....	23	1,083,207	86,335	36	35	1	.....	35,755	1,050
100,000-249,999.....	9	1,416,822	59,012	36	35	1	.....	42,456	1,500
250,000-499,999.....	2	2,896,155	128,100	20	20	.....	.....	27,078	.....
500,000-999,999.....	3								
1,000,000-1,999,999.....	2	6,545,134	270,952	18	17	1	.....	28,018	2,580
4,000,000-6,999,999.....	1								
Unclassified.....	13	289,434	24,464	15	6	9	.....	8,924	14,425
Texas, total.....	169	760,792,694	28,252,067	3,441	2,766	669	6	4,325,756	1,595,682
1-24,999.....	2	110,236	4,199	.....	.....	.....	.....	360	.....
25,000-99,999.....	2								
100,000-249,999.....	3	414,644	14,424	5	5	.....	.....	4,573	.....
250,000-499,999.....	8	2,855,438	85,757	38	27	11	.....	33,546	18,359
500,000-999,999.....	16	11,821,569	437,417	170	158	28	4	195,275	83,387
1,000,000-1,999,999.....	28	39,584,558	1,415,312	324	280	44	.....	430,085	88,780
2,000,000-3,999,999.....	39	112,070,587	4,079,805	879	601	78	.....	922,700	193,411
4,000,000-6,999,999.....	30	162,042,032	6,325,545	741	656	105	.....	1,052,543	236,117
7,000,000-9,999,999.....	12	100,418,750	3,745,539	368	314	54	.....	503,302	111,512
10,000,000 and over.....	19	312,334,961	11,899,624	833	697	136	.....	1,096,315	402,230
Unclassified.....	10	19,639,973	740,345	283	68	213	2	87,077	483,886
West Virginia, total.....	78	46,619,404	3,395,688	894	774	120	.....	880,045	232,796
1-24,999.....	13	128,029	11,523	7	7	.....	.....	5,203	.....
25,000-99,999.....	9	571,894	22,661	45	44	1	.....	39,742	500
100,000-249,999.....	16	2,514,448	97,483	121	120	1	.....	107,639	2,510
250,000-499,999.....	20	6,713,718	263,540	272	271	1	.....	224,210	2,400
500,000-999,999.....	5	3,481,790	447,266	96	85	11	.....	128,533	24,037
1,000,000-1,999,999.....	8	10,732,247	1,002,220	137	124	13	.....	192,229	31,769
2,000,000-3,999,999.....	3	7,821,896	575,566	53	47	6	.....	73,396	14,311
4,000,000-6,999,999.....	1								
7,000,000-9,999,999.....	1	14,655,382	975,629	163	76	87	.....	111,893	157,289
Unclassified.....	2								
Wyoming, total.....	7	30,684,892	1,567,690	173	157	16	.....	274,322	36,987
25,000-99,999.....	1								
250,000-499,999.....	1	1,640,662	109,401	34	31	3	.....	42,206	5,971
500,000-999,999.....	1								
1,000,000-1,999,999.....	1								
4,000,000-6,999,999.....	1	29,044,230	1,458,289	138	126	12	.....	232,116	27,866
10,000,000 and over.....	1								
Unclassified.....	.....	.....	.....	1	.....	1	.....	.....	3,150
Colorado, Michigan, Montana, and New York, total.....	5	5,486,915	313,828	42	34	8	.....	44,863	10,605
25,000-99,999.....	1								
100,000-249,999.....	2	5,486,915	313,828	35	34	1	.....	44,863	2,900
2,000,000-3,999,999.....	2								
Unclassified.....	.....	.....	.....	7	.....	7	.....	.....	7,705

<sup>1</sup> For definition of the industry see table 51, footnote 1. Except as noted, each report for a single plant was classified by quantity of natural gasoline produced; reports on which the value of natural gasoline represented less than 80 percent of the total value of all products, reports for more than 1 plant, and reports for central offices reported separately from their associated plants are included in "Unclassified."

<sup>2</sup> Includes statistics for 24 salaried employees, paid \$67,655 at central offices in Missouri and Oregon.

TABLE 61.—SELECTED STATISTICS FOR NATURAL-GASOLINE PLANTS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF WAGE EARNERS AND BY STATE: 1939<sup>1</sup>

[For producing operations only]

STATE AND NUMBER OF WAGE EARNERS	Number of plants	Production of natural gasoline (gallons)	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.....	734	2,141,778,805	\$98,337,763	<sup>2</sup> 10,347	8,332	<sup>2</sup> 2,005	10	\$13,212,248	\$5,051,939
None.....	3	6,398,368	361,169	.....	.....	.....	.....	.....	.....
1-5.....	142	49,096,463	2,102,716	494	422	70	2	568,555	134,118
6-20.....	272	801,127,798	35,681,902	3,587	3,171	392	4	5,022,671	920,660
21-50.....	117	959,203,314	42,886,679	3,858	3,435	423	.....	5,488,460	1,083,450
51-100.....	11	238,656,774	10,518,113	981	847	134	.....	1,458,664	309,717
101-250.....	1	87,294,088	4,787,184	<sup>2</sup> 1,447	457	<sup>2</sup> 986	4	673,898	<sup>2</sup> 2,603,794
Unclassified.....	188								
Arkansas, total.....	9	24,837,570	939,575	103	89	14	.....	138,166	25,218
1-5.....	1								
6-20.....	6	24,837,570	939,575	103	89	14	.....	138,166	25,218
21-50.....	1								
Unclassified.....	1								
California, total.....	96	604,696,961	36,132,917	2,026	1,441	585	.....	2,735,037	1,640,030
None.....	2	19,744,651	1,173,737	61	52	9	.....	106,279	21,873
1-5.....	14	225,641,362	13,844,653	616	541	75	.....	1,016,025	209,142
6-20.....	48	269,419,557	15,566,056	673	602	71	.....	1,141,303	214,770
21-50.....	21	58,788,129	3,605,727	184	157	27	.....	301,809	82,235
51-100.....	3	31,103,282	1,942,544	492	89	403	.....	169,521	1,112,210
Unclassified.....	8								
Illinois, total.....	53	4,105,510	287,536	73	69	4	.....	82,138	7,357
1-5.....	9	2,529,541	197,587	51	47	4	.....	57,249	7,357
6-20.....	1	1,575,969	89,969	22	22	.....	.....	24,889	.....
Unclassified.....	43								
Kansas, total.....	18	61,166,104	2,140,420	253	218	35	.....	321,482	65,439
1-5.....	3	1,303,215	39,551	14	10	4	.....	16,390	6,474
6-20.....	10	35,873,095	1,078,115	128	109	19	.....	166,092	36,114
21-50.....	4	24,189,794	1,022,754	111	99	12	.....	139,000	25,851
Unclassified.....	1								
Kentucky, total.....	6	7,698,708	708,139	66	63	3	.....	85,184	7,943
1-5.....	1	2,508,973	229,344	39	36	3	.....	49,288	7,943
6-20.....	2	5,189,735	478,795	27	27	.....	.....	35,896	.....
Unclassified.....	1								
Louisiana, total.....	29	93,389,376	3,482,080	431	349	82	.....	496,068	349,325
1-5.....	2	40,303,326	1,438,851	237	210	27	.....	312,315	71,557
6-20.....	19	53,086,050	2,043,229	194	139	55	.....	183,753	277,768
Unclassified.....	8								
New Mexico, total.....	6	54,372,551	1,765,123	158	138	20	.....	231,682	40,033
1-5.....	3	31,009,849	997,378	59	49	10	.....	74,988	20,527
6-20.....	3	23,362,702	767,745	99	89	10	.....	158,694	19,508
Unclassified.....	12	7,476,627	367,956	92	82	10	.....	125,986	19,557
Ohio, total.....	12	7,476,627	367,956	92	82	10	.....	125,986	19,557
1-5.....	5	1,671,275	73,051	20	18	2	.....	24,304	2,336
6-20.....	3	5,794,697	294,221	64	64	.....	.....	101,682	.....
Unclassified.....	1	10,655	684	8	.....	8	.....	.....	17,221
Oklahoma, total.....	139	428,107,437	16,392,872	2,424	2,018	403	3	3,316,033	933,757
1-5.....	35	12,244,869	407,491	132	112	19	1	156,505	32,746
6-20.....	48	97,224,114	3,681,443	600	538	62	.....	650,864	129,575
21-50.....	29	183,861,191	7,231,247	938	858	80	.....	1,438,437	169,132
51-100.....	3	98,377,275	3,624,223	369	320	49	.....	577,770	102,859
Unclassified.....	23	35,399,986	1,448,468	365	190	193	2	294,457	499,445
Pennsylvania, total.....	107	12,444,056	593,872	147	134	12	1	155,466	19,555
None.....	1	4,610,323	214,902	75	73	1	1	83,847	1,050
1-5.....	32	6,211,318	258,436	34	33	1	.....	43,266	2,580
6-20.....	4	1,422,415	120,534	38	28	10	.....	28,573	15,925
Unclassified.....	70								
Texas, total.....	169	760,792,694	28,252,067	3,441	2,766	669	6	4,325,756	1,595,682
1-5.....	15	9,601,468	319,049	69	58	31	.....	76,968	62,215
6-20.....	91	316,584,553	11,948,880	1,303	1,129	170	4	1,656,747	390,469
21-50.....	40	351,401,350	12,958,534	1,422	1,221	201	.....	1,684,909	546,368
51-100.....	4	57,584,810	2,169,398	326	275	51	.....	401,441	107,327
Unclassified.....	19	25,620,713	875,218	301	83	216	2	103,661	469,305
West Virginia, total.....	78	46,619,404	3,395,688	694	774	120	.....	880,045	232,796
1-5.....	22	2,478,885	86,735	70	69	1	.....	65,747	2,510
6-20.....	31	20,921,162	1,110,528	364	357	7	.....	363,775	17,415
21-50.....	10	21,476,728	2,110,116	344	314	30	.....	394,723	68,877
Unclassified.....	15	1,742,629	86,309	116	34	82	.....	35,800	144,194
Wyoming, total.....	7	30,684,892	1,567,690	173	157	16	.....	274,322	36,987
1-5.....	1								
6-20.....	5	30,684,892	1,567,690	172	167	15	.....	274,322	33,837
Unclassified.....	1			1	.....	1	.....	.....	3,150
Colorado, Michigan, Montana, and New York, total.....	5	5,486,915	313,828	42	34	8	.....	44,863	10,605
1-5.....	2								
6-20.....	2	5,486,915	313,828	42	34	8	.....	44,863	10,605
Unclassified.....	1								

<sup>1</sup> For definition of the industry see table 51, footnote 1. Except as noted, each report for a single plant was classified by average number of wage earners employed during the year; reports for more than one plant, reports on which number of wage earners, by month, was not reported, and reports for central offices reported separately from their associated plants are included in "Unclassified."

<sup>2</sup> Includes statistics for 24 salaried employees paid \$67,655 at central offices in Missouri and Oregon.

TABLE 62.—SELECTED STATISTICS FOR NATURAL-GASOLINE PLANTS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK AND BY STATE: 1939<sup>1</sup>

[For producing operations only]

STATE AND HOURS PER WEEK	Number of plants	Production of natural gasoline (gallons)	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.....	734	2,141,778,805	\$98,337,763	<sup>2</sup> 10,347	8,332	<sup>2</sup> 2,005	10	\$13,212,248	<sup>2</sup> \$5,051,939
1-34.....	1	855,551,413	42,285,806	2,956	2,647	308	3	4,758,216	820,349
35-39.....	153	816,245,055	35,206,230	4,009	3,558	451	.....	5,477,700	1,007,280
40.....	215	246,948,100	8,850,824	1,214	1,049	164	1	1,452,093	388,625
41-42.....	108	120,598,088	4,919,959	573	514	59	.....	738,979	155,987
43-44.....	44	34,163,072	1,182,897	149	121	28	.....	179,886	44,877
45-47.....	1	4,692,710	113,686	25	22	3	.....	31,580	2,212
48.....	13	63,580,369	3,778,361	<sup>2</sup> 1,421	421	<sup>2</sup> 994	6	573,794	<sup>2</sup> 2,632,609
49-53.....	1								
54-59.....	4								
Unclassified.....	194								
Arkansas, total.....	9	24,837,570	939,575	103	89	14	.....	138,166	25,218
35-39.....	3	19,705,834	735,147	71	66	5	.....	101,786	8,818
40.....	2	5,131,736	204,428	32	23	9	.....	36,380	16,400
48.....	3								
Unclassified.....	1								
California, total.....	96	604,596,961	36,132,917	2,026	1,441	585	.....	2,735,037	1,640,030
35-39.....	61	483,121,761	27,736,379	1,128	1,003	123	.....	1,885,887	347,759
40.....	22	109,219,039	8,594,368	397	344	53	.....	676,219	176,135
41-42.....	3	13,366,709	708,082	41	31	10	.....	58,624	24,609
43-44.....	3	4,767,532	265,029	34	27	7	.....	44,490	16,644
45.....	2	2,617,079	165,580	18	15	3	.....	26,694	3,890
48.....	1	11,505,021	675,499	410	21	389	.....	43,123	1,086,993
54-59.....	4								
Unclassified.....	1								
Illinois, total.....	53	4,105,510	287,536	73	69	4	.....	82,138	7,357
35-39.....	1	3,259,773	243,017	57	53	4	.....	70,236	7,357
40.....	1								
41-42.....	17	845,737	44,519	16	16	.....	.....	11,902	.....
43-44.....	1								
Unclassified.....	33								
Kansas, total.....	18	61,166,104	2,140,420	253	216	35	.....	321,482	65,439
35-39.....	2	31,878,713	1,197,672	164	141	23	.....	210,177	41,570
40.....	10	29,287,391	942,748	89	77	12	.....	111,305	23,869
41-42.....	1								
43-44.....	3								
48.....	1								
Unclassified.....	1								
Kentucky, total.....	6	7,698,708	708,139	66	63	3	.....	65,184	7,943
40.....	2	6,928,002	583,847	47	46	1	.....	64,454	263
43-44.....	1	770,708	122,292	19	17	2	.....	20,730	7,680
Unclassified.....	3								
Louisiana, total.....	29	93,389,376	3,482,080	431	349	82	.....	496,088	349,325
35-39.....	10	13,892,033	470,893	106	97	11	.....	165,807	29,628
40.....	11	80,500,432	2,275,893	183	165	18	.....	219,155	40,457
41-42.....	3	14,980,353	615,053	81	74	7	.....	96,972	16,530
43-44.....	1	4,036,558	120,241	59	13	46	.....	14,134	262,710
48.....	1								
Unclassified.....	3								
New Mexico, total.....	6	54,372,551	1,765,123	156	136	20	.....	231,682	40,033
40.....	3	35,277,381	1,065,332	87	72	15	.....	115,776	27,202
41-42.....	1	19,095,170	699,791	71	66	5	.....	115,906	12,831
43-44.....	2								
Ohio, total.....	12	7,476,627	367,956	92	82	10	.....	125,986	19,557
40.....	7	7,396,239	363,409	81	80	1	.....	125,016	2,280
Unclassified.....	5	80,388	4,547	11	2	9	.....	970	17,277
Oklahoma, total.....	139	428,107,437	16,392,872	2,424	2,018	403	3	3,316,033	933,757
35-39.....	45	198,744,019	6,985,093	922	831	91	.....	1,497,511	201,822
40.....	34	162,619,068	6,777,822	680	786	94	.....	1,275,822	190,493
41-42.....	14	18,887,536	610,466	118	103	15	.....	121,334	23,632
43-44.....	17	25,201,209	1,117,333	180	166	14	.....	233,755	31,735
48.....	5	13,681,142	452,834	69	54	15	.....	76,908	20,900
54-59.....	1	13,014,463	449,324	255	78	174	3	110,705	464,875
Unclassified.....	23								

<sup>1</sup>For definition of the industry see table 51, footnote 1. Each report was classified by reported number of hours per wage earner in the full-time workweek; reports on which the number of hours was not reported, reports on which no wage earners were reported, and reports for central offices reported separately from their associated plants are included in "Unclassified."

<sup>2</sup>Includes statistics for 24 salaried employees paid \$67,655 at central offices in Missouri and Oregon.

## NATURAL GASOLINE

217

TABLE 62.—SELECTED STATISTICS FOR NATURAL-GASOLINE PLANTS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF HOURS PER WAGE EARNER IN THE FULL-TIME WORKWEEK AND BY STATE, 1939<sup>1</sup>—Continued

[For producing operations only]

STATE AND HOURS PER WEEK	Number of plants	Production of natural gasoline (gallons)	Value of all products	NUMBER OF PERSONS ENGAGED				Wages	Salaries
				Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members		
Pennsylvania, total.....	107	12,444,056	\$593,872	147	134	12	1	\$ 155,486	\$19,555
40.....	16	7,421,370	315,489	77	75	2	.....	94,747	4,080
41-42.....	4	359,383	28,628	7	7	.....	.....	10,399	.....
43-44.....	3	2,536,825	137,196	16	16	.....	.....	24,029	.....
54-59.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Unclassified.....	83	2,126,478	112,559	47	36	10	1	26,311	15,475
Texas, total.....	169	780,792,694	28,252,067	3,441	2,766	669	6	4,325,756	1,595,682
1-34.....	1	.....	.....	.....	.....	.....	.....	.....	.....
36-39.....	28	148,393,526	5,389,309	581	518	60	3	856,036	196,671
40.....	63	343,090,429	13,550,984	1,455	1,227	228	.....	2,038,810	488,040
41-42.....	47	186,009,464	6,199,027	845	718	126	1	998,598	312,774
43-44.....	13	46,364,791	1,896,802	211	184	27	.....	272,784	81,223
45-47.....	1	.....	.....	.....	.....	.....	.....	.....	.....
49-53.....	1	12,967,191	349,307	35	33	2	.....	44,855	1,612
54-59.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Unclassified.....	14	21,967,293	866,638	314	86	226	2	114,873	515,362
West Virginia, total.....	78	46,619,404	3,395,688	894	774	120	.....	880,045	232,796
40.....	43	39,249,507	2,082,803	615	599	16	.....	639,771	35,920
41-42.....	14	.....	.....	.....	.....	.....	.....	.....	.....
48.....	1	1,577,873	50,776	46	46	.....	.....	40,501	.....
Unclassified.....	20	5,792,224	1,282,109	233	129	104	.....	199,773	196,876
Wyoming, total.....	7	30,684,892	1,567,690	173	157	16	.....	274,322	36,987
36-39.....	3	24,805,736	1,247,481	132	119	13	.....	219,809	29,397
40.....	1	.....	.....	.....	.....	.....	.....	.....	.....
41-42.....	3	5,879,156	320,209	40	38	2	.....	54,513	4,440
Unclassified.....	.....	.....	.....	1	.....	1	.....	.....	3,150
Colorado, Michigan, Montana, and New York, total.....	5	5,486,915	313,828	42	34	8	.....	44,863	10,605
41-42.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Unclassified.....	4	5,486,915	313,828	42	34	8	.....	44,863	10,605

<sup>1</sup>For definition of the industry see table 51, footnote 1. Each report was classified by reported number of hours per wage earner in the full-time workweek; reports on which the number of hours was not reported, reports on which no wage earners were reported, and reports for central offices reported separately from their associated plants are included in "Unclassified."



TABLE 63.—SELECTED STATISTICS FOR NATURAL-GASOLINE PLANTS IN THE UNITED STATES, CLASSIFIED BY NUMBER OF DAYS ACTIVE DURING THE YEAR: 1939<sup>1</sup>

[For producing operations only]

STATE AND NUMBER OF DAYS ACTIVE DURING YEAR	Number of plants	Production of natural gasoline (gallons)	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.....	734	2,141,776,805	\$96,337,763	10,347	8,332	2,005	10	\$13,212,248	\$5,051,939
1-49.....	14	3,178,886	115,148	46	33	13	.....	37,879	14,271
50-99.....	5	584,084	20,770	6	6	.....	.....	7,872	.....
100-149.....	6	6,073,761	258,749	81	68	13	.....	95,570	18,211
150-199.....	10	4,280,802	132,480	47	41	6	.....	59,992	7,509
200-249.....	7	9,542,598	391,690	53	49	3	1	62,316	3,901
250-299.....	9	6,651,515	247,143	60	50	9	1	67,889	17,650
300-349.....	3	3,038,978	134,724	49	42	7	.....	38,540	13,780
350-399.....	6	15,490,916	646,848	62	53	9	.....	83,769	15,501
400-449.....	7	4,206,512	241,613	70	65	5	.....	85,091	9,357
450-499.....	539	2,010,291,537	90,637,098	8,523	7,552	987	4	12,125,230	2,362,590
Unclassified.....	128	78,619,216	3,511,500	1,350	373	973	4	548,100	2,569,189

<sup>1</sup> For definition of the industry see table 51, footnote 1. Each report for a single plant was classified by reported number of days the plant was active during the year; reports for more than 1 plant, reports on which number of days active was not reported, and reports for central offices reported separately are included in "Unclassified."

TABLE 64.—SELECTED STATISTICS FOR NATURAL-GASOLINE PLANTS IN THE UNITED STATES, CLASSIFIED BY OUTPUT PER MAN-HOUR AND BY STATE: 1939<sup>1</sup>

[For producing operations only]

STATE AND GALLONS OF NATURAL GASOLINE PER MAN-HOUR	Number of plants	Production of natural gasoline (gallons)	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.....	734	2,141,776,805	\$96,337,763	10,347	8,332	2,005	10	\$13,212,248	\$5,051,939
Less than 12.5.....	38	2,045,088	79,762	159	158	1	.....	170,092	1,050
12.5-24.9.....	52	11,879,695	501,833	458	443	14	1	461,646	19,001
25.0-49.9.....	88	55,564,384	2,333,475	774	706	68	.....	1,040,987	135,786
50.0-74.9.....	75	150,377,259	5,973,604	1,284	1,130	154	.....	1,778,518	350,368
75.0-99.9.....	60	170,099,214	6,832,078	1,040	925	115	.....	1,515,027	232,653
100.0-149.9.....	95	368,617,944	14,741,123	1,697	1,476	221	.....	2,508,830	507,638
150.0-199.9.....	41	293,061,386	12,869,188	963	813	150	.....	1,424,367	418,067
200.0-249.9.....	23	241,658,279	10,839,942	624	558	66	.....	955,032	213,152
250.0-299.9.....	17	157,294,871	6,770,129	348	304	44	.....	515,476	97,026
300.0 and over.....	27	436,263,020	18,938,754	588	520	68	.....	915,126	182,045
Unclassified.....	220	255,117,865	16,637,877	2,412	1,299	2,104	9	1,927,147	2,894,983
Arkansas, total.....	9	24,837,870	939,575	103	89	14	.....	138,166	25,218
Less than 12.5.....	1	.....	.....	.....	.....	.....	.....	.....	.....
12.5-24.9.....	4	7,803,136	324,927	57	46	11	.....	76,990	22,260
25.0-49.9.....	2	.....	.....	.....	.....	.....	.....	.....	.....
50.0-74.9.....	1	17,034,434	614,648	46	43	3	.....	61,176	2,958
75.0-99.9.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Unclassified.....	1	.....	.....	.....	.....	.....	.....	.....	.....
California, total.....	96	604,596,961	36,132,917	2,026	1,441	585	.....	2,735,037	1,640,030
Less than 12.5.....	1	.....	.....	.....	.....	.....	.....	.....	.....
12.5-24.9.....	3	228,611	16,240	7	6	1	.....	11,003	600
25.0-49.9.....	8	5,711,804	324,606	88	75	13	.....	131,755	20,703
50.0-74.9.....	9	14,422,541	848,657	128	119	9	.....	225,564	29,120
75.0-99.9.....	4	8,940,524	541,757	63	58	5	.....	111,743	11,085
100.0-149.9.....	19	58,235,509	3,548,055	303	249	54	.....	478,886	155,069
150.0-199.9.....	17	84,654,052	5,346,203	302	249	53	.....	482,312	154,521
200.0-249.9.....	9	107,962,333	6,178,902	283	266	17	.....	497,708	52,815
250.0-299.9.....	5	49,632,806	2,802,555	104	98	6	.....	183,006	24,498
300.0 and over.....	14	211,546,534	11,583,803	290	259	31	.....	490,186	104,647
Unclassified.....	7	63,262,247	4,942,039	468	64	394	.....	124,874	1,086,972
Illinois, total.....	53	4,105,510	287,536	73	69	4	.....	82,138	7,357
Less than 12.5.....	2	.....	.....	.....	.....	.....	.....	.....	.....
12.5-24.9.....	5	279,210	18,982	10	10	.....	.....	7,193	.....
25.0-49.9.....	18	1,567,362	85,520	21	21	.....	.....	27,123	.....
50.0-74.9.....	28	2,258,938	183,034	42	38	4	.....	47,822	7,357
Unclassified.....	28	.....	.....	.....	.....	.....	.....	.....	.....
Kansas, total.....	18	61,166,104	2,140,420	253	218	35	.....	321,482	65,439
Less than 12.5.....	4	4,952,404	223,743	42	36	6	.....	53,188	8,994
12.5-24.9.....	3	3,318,561	118,153	28	21	7	.....	30,594	9,779
25.0-49.9.....	5	16,128,007	504,787	79	70	9	.....	105,648	20,003
50.0-74.9.....	1	.....	.....	.....	.....	.....	.....	.....	.....
75.0-99.9.....	1	33,027,556	1,105,558	57	51	6	.....	74,221	13,717
100.0-149.9.....	1	.....	.....	.....	.....	.....	.....	.....	.....
150.0-199.9.....	3	3,738,576	188,179	47	40	7	.....	57,831	12,946
200.0-249.9.....	3	.....	.....	.....	.....	.....	.....	.....	.....
250.0-299.9.....	6	7,698,708	706,139	66	63	3	.....	85,184	7,943
300.0 and over.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Unclassified.....	5	7,698,708	706,139	66	63	3	.....	85,184	7,943
Louisiana, total.....	29	93,369,376	3,482,080	431	349	82	.....	496,066	349,325
Less than 12.5.....	2	.....	.....	.....	.....	.....	.....	.....	.....
12.5-24.9.....	3	3,090,751	149,537	67	61	6	.....	82,993	11,760
25.0-49.9.....	3	5,369,998	197,307	47	43	4	.....	63,886	11,475
50.0-74.9.....	4	7,262,754	314,452	46	43	3	.....	59,861	8,289
75.0-99.9.....	7	18,971,159	599,943	87	78	9	.....	129,417	23,244
100.0-149.9.....	2	.....	.....	.....	.....	.....	.....	.....	.....
150.0-199.9.....	1	51,629,399	1,690,428	90	79	11	.....	117,686	27,267
200.0-249.9.....	2	.....	.....	.....	.....	.....	.....	.....	.....
250.0-299.9.....	5	7,065,315	330,413	94	45	49	.....	42,225	267,290
300.0 and over.....	5	.....	.....	.....	.....	.....	.....	.....	.....
Unclassified.....	5	.....	.....	.....	.....	.....	.....	.....	.....

See footnotes at end of table.

## NATURAL GASOLINE

219

TABLE 64.—SELECTED STATISTICS FOR NATURAL-GASOLINE PLANTS IN THE UNITED STATES, CLASSIFIED BY OUTPUT PER MAN-HOUR AND BY STATE: 1939<sup>1</sup>—Continued

[For producing operations only]

STATE AND GALLONS OF NATURAL GASOLINE PER MAN-HOUR	Number of plants	Production of natural gasoline (gallons)	Value of all products	NUMBER OF PERSONS ENGAGED				Wages	Salaries
				Total	Wage earners (average for the year)	Salaried employees	Proprietors and firm members		
New Mexico, total.....	6	54,372,551	\$1,765,123	158	138	20	.....	\$231,682	\$40,033
75.0-99.9.....	1	23,362,702	767,745	99	89	10	.....	156,694	19,506
100.0-149.9.....	2								
150.0-199.9.....	1								
250.0-299.9.....	1	31,009,849	997,378	59	49	10	.....	74,988	20,527
300.0 and over.....	1								
Ohio, total.....	12	7,478,627	367,956	92	82	10	.....	125,986	19,557
12.5-24.9.....	1								
25.0-49.9.....	5	5,230,777	262,671	66	66	.....	.....	98,363	.....
50.0-74.9.....	1								
75.0-99.9.....	1	2,235,195	104,601	18	18	2	.....	27,623	2,336
100.0-149.9.....	1								
Unclassified.....	3	10,655	684	8	.....	8	.....	.....	17,221
Oklahoma, total.....	139	428,107,437	16,392,872	2,424	2,018	403	3	3,316,033	933,757
Less than 12.5.....	5	355,460	14,675	27	27	.....	.....	37,121	.....
12.5-24.9.....	8	2,332,854	112,863	62	57	5	.....	92,194	7,335
25.0-49.9.....	20	15,115,362	580,447	196	178	18	.....	279,975	32,748
50.0-74.9.....	17	29,511,132	1,153,380	246	221	25	.....	352,057	53,519
75.0-99.9.....	25	82,908,274	3,270,835	493	451	42	.....	745,073	85,370
100.0-149.9.....	21	90,098,552	2,999,447	400	355	45	.....	607,443	90,373
150.0-199.9.....	8	114,251,272	4,108,592	342	297	45	.....	525,934	90,926
200.0-249.9.....	2								
250.0-299.9.....	2	63,589,672	2,075,224	140	122	18	.....	214,713	37,601
300.0 and over.....	1								
Unclassified.....	30	29,944,879	2,077,409	518	310	205	3	461,523	535,885
Pennsylvania, total.....	107	12,444,056	593,872	147	134	12	1	155,486	19,555
Less than 12.5.....	15	311,238	14,985	30	29	1	.....	28,086	1,050
12.5-24.9.....	4	718,291	27,317	24	24	.....	.....	30,091	.....
25.0-49.9.....	6	1,368,115	55,048	22	22	.....	.....	24,311	.....
50.0-74.9.....	1								
75.0-99.9.....	2	1,776,368	98,715	11	11	.....	.....	17,722	.....
100.0-149.9.....	2								
250.0-299.9.....	1	5,950,357	228,357	15	14	1	.....	23,569	2,580
300.0 and over.....	1								
Unclassified.....	75	2,319,687	169,450	45	34	10	1	33,705	15,925
Texas, total.....	169	760,792,694	28,252,067	3,441	2,766	669	6	4,325,756	1,595,662
Less than 12.5.....	1								
12.5-24.9.....	1	16,413,903	527,999	246	214	31	1	318,764	61,760
25.0-49.9.....	16								
50.0-74.9.....	35	89,048,523	3,219,704	781	657	104	.....	1,000,191	234,617
75.0-99.9.....	14	50,463,647	1,831,655	303	258	45	.....	430,873	92,386
100.0-149.9.....	32	125,399,914	4,332,688	570	492	78	.....	768,819	166,156
150.0-199.9.....	11	78,066,364	2,894,218	287	221	46	.....	345,399	160,623
200.0-249.9.....	11	104,375,311	3,479,312	259	222	37	.....	345,729	132,421
250.0-299.9.....	6	50,824,669	1,896,078	112	93	19	.....	153,171	40,292
300.0 and over.....	7	128,839,102	4,121,308	168	146	22	.....	243,866	43,006
Unclassified.....	35	119,563,261	5,949,107	755	463	287	5	718,944	664,421
West Virginia, total.....	78	46,619,404	3,395,688	894	774	120	.....	880,045	232,796
Less than 12.5.....	11	732,740	28,219	69	69	.....	.....	61,621	.....
12.5-24.9.....	26	5,648,626	212,299	286	265	1	.....	233,617	2,510
25.0-49.9.....	10	7,247,283	339,052	122	119	3	.....	135,588	7,820
50.0-74.9.....	3	3,836,300	167,476	30	29	1	.....	41,576	3,980
75.0-99.9.....	1								
100.0-149.9.....	2	14,413,418	840,040	63	53	10	.....	84,150	20,830
150.0-199.9.....	1								
Unclassified.....	24	14,541,037	1,808,602	324	219	105	.....	323,493	197,876
Wyoming, total.....	7	30,684,892	1,567,690	173	157	16	.....	274,322	36,987
12.5-24.9.....	2								
50.0-74.9.....	1	2,266,329	147,171	37	31	6	.....	54,188	12,101
75.0-99.9.....	1								
100.0-149.9.....	2	26,418,563	1,420,519	136	126	10	.....	220,134	24,886
Unclassified.....	1								
Colorado, Michigan, Montana, and New York, total.....	5	5,486,915	313,828	42	34	8	.....	44,863	10,605
Less than 12.5.....	1								
25.0-49.9.....	1	5,486,915	313,828	42	34	8	.....	44,863	10,605
Unclassified.....	3								

<sup>1</sup> For definition of the industry see table 51, footnote 1. Except as noted, each report was classified by gallons of natural gasoline produced per man-hour; reports on which the value of natural gasoline represented less than 80 percent of the total value of all products, reports on which the number of proprietors performing manual labor represented 20 percent or more of the total working force, reports on which man-hours worked were not reported, and reports for central offices reported separately from their associated plants are included in "Unclassified."

<sup>2</sup> Includes statistics for 24 salaried employees paid \$67,655 at central offices in Missouri and Oregon.

TABLE 65.—PRINCIPAL STATISTICS FOR THE NATURAL-GASOLINE INDUSTRY, BY STATE AND BY COUNTY: 1939<sup>1</sup>  
 [For producing operations only]

STATE AND COUNTY	Number of operating companies <sup>2</sup>	Number of natural-gasoline plants	NUMBER OF PERSONS ENGAGED				Production of natural gasoline (gallons)	Value of natural gasoline at plants	Value of all products
			Total	Wage earners (average for the year)	Salaryed employees	Proprietors and firm members			
UNITED STATES.....	295	734	<sup>3</sup> 10,347	8,332	<sup>3</sup> 2,005	10	2,141,778,805	\$87,742,848	\$96,337,763
ARKANSAS <sup>4</sup> .....	7	9	103	89	14	.....	24,837,570	939,575	939,575
CALIFORNIA.....	37	96	<sup>5</sup> 2,028	1,441	<sup>5</sup> 585	.....	604,596,961	34,246,337	36,132,917
Fresno.....	4	4	65	59	6	.....	53,427,981	3,116,723	3,144,754
Kern.....	9	19	216	194	22	.....	80,314,843	3,364,662	3,642,136
Kings.....	3	5	129	115	14	.....	101,963,630	5,573,011	6,517,210
Los Angeles.....	25	40	967	702	265	.....	251,899,867	14,888,749	14,992,450
Orange.....	7	10	208	182	24	.....	55,974,877	3,463,240	3,982,081
Santa Barbara.....	6	7	69	64	5	.....	12,295,085	723,451	726,386
Ventura.....	9	11	138	125	11	.....	68,720,678	3,096,501	3,127,900
ILLINOIS.....	22	53	73	69	4	.....	4,105,510	233,599	287,536
Crawford.....	16	42	23	23	.....	.....	1,382,862	79,300	79,300
Lawrence.....	4	6	9	9	.....	.....	430,185	24,020	24,020
Other counties <sup>6</sup> .....	5	5	41	37	4	.....	2,292,443	130,279	164,216
KANSAS.....	11	18	253	218	35	.....	61,166,104	1,976,271	2,140,420
Cowley.....	3	3	33	28	5	.....	3,919,091	136,608	155,462
Other counties <sup>7</sup> .....	9	15	220	190	30	.....	57,247,013	1,839,663	1,984,958
KENTUCKY <sup>8</sup> .....	4	6	66	63	3	.....	7,698,708	343,001	706,139
LOUISIANA.....	16	29	<sup>9</sup> 431	349	<sup>9</sup> 82	.....	93,389,376	3,313,344	3,482,080
Caddo.....	12	13	230	170	60	.....	61,673,899	2,228,273	2,377,237
Claiborne.....	5	5	53	51	2	.....	8,004,565	300,085	300,246
Other counties <sup>10</sup> .....	6	10	142	128	14	.....	23,710,912	784,986	804,597
NEW MEXICO <sup>11</sup> .....	5	6	158	136	20	.....	54,372,551	1,686,041	1,765,123
OHIO.....	7	12	<sup>12</sup> 92	82	<sup>12</sup> 10	.....	7,476,627	353,327	367,956
Monroe.....	3	3	1	1	.....	.....	25,561	1,489	1,489
Other counties <sup>13</sup> .....	5	9	83	81	2	.....	7,451,066	351,838	366,467
OKLAHOMA.....	55	139	2,424	2,018	403	3	428,107,437	15,057,483	16,392,872
Carter.....	3	4	68	62	6	.....	8,106,774	241,342	242,781
Crsek.....	22	28	319	285	33	1	51,242,988	1,780,681	1,821,415
Lincoln.....	3	3	40	37	3	.....	4,289,509	182,725	183,350
Oklahoma.....	6	14	466	403	63	.....	110,127,854	3,799,588	4,095,457
Osage.....	10	17	351	319	32	.....	43,245,552	1,708,085	2,379,272
Payne.....	4	4	23	21	2	.....	1,899,510	55,055	58,055
Pontotoc.....	3	3	134	122	12	.....	40,140,828	1,400,148	1,402,782
Pottawatomie.....	4	4	109	102	7	.....	32,362,581	1,127,227	1,122,331
Seminole.....	10	20	456	408	48	.....	69,679,012	3,226,506	3,467,082
Tulsa.....	9	11	142	29	11	2	1,657,200	72,754	108,827
Washington.....	3	3	62	7	55	.....	130,835	5,699	5,699
Other counties <sup>14</sup> .....	19	30	254	223	31	.....	45,216,394	1,494,695	1,525,851
PENNSYLVANIA.....	70	107	147	134	12	1	12,444,056	545,624	593,872
Allegheny.....	8	9	27	22	4	1	889,779	36,197	48,041
Butler.....	13	19	8	8	.....	.....	167,780	7,198	7,198
Clarion.....	7	10	3	3	.....	.....	69,348	7,497	7,497
Crawford.....	11	13	3	3	.....	.....	170,100	7,527	7,527
Forest.....	4	4	5	5	.....	.....	229,184	9,729	9,729
Greene.....	4	5	26	25	1	.....	5,317,876	193,239	193,239
McKean.....	3	4	17	17	.....	.....	316,302	14,886	49,815
Warren.....	18	20	13	12	1	.....	1,422,984	74,447	75,922
Other counties <sup>15</sup> .....	16	23	45	39	6	.....	3,660,723	194,904	194,904
TEXAS.....	90	169	<sup>16</sup> 3,441	2,766	<sup>16</sup> 669	<sup>16</sup> 6	760,792,694	25,314,470	28,252,067
Anderson.....	4	5	63	55	8	.....	15,839,585	447,218	447,218
Carson.....	5	8	149	130	19	.....	28,145,506	877,807	1,015,844
Eastland.....	7	9	234	195	39	.....	25,236,010	811,780	818,327
Ector.....	3	4	117	101	16	.....	20,478,390	635,877	682,427
Gray.....	9	13	330	274	56	.....	65,430,221	2,107,000	2,386,099
Gregg.....	10	10	300	256	44	.....	107,649,967	3,369,358	3,936,061
Harris.....	3	8	52	35	17	.....	13,235,193	532,620	727,376
Hutchinson.....	5	11	344	292	52	.....	100,942,098	3,167,871	3,629,255
Moore.....	5	5	74	66	8	.....	40,130,899	1,243,738	1,251,690
Nueces.....	9	9	112	89	23	.....	47,121,909	1,814,796	1,827,586
Rusk.....	5	8	250	209	41	.....	80,509,979	2,984,953	3,899,315
Stephens.....	5	7	173	143	30	.....	30,427,689	1,044,244	1,044,244
Ward.....	3	3	66	58	8	.....	22,541,013	693,911	693,911
Wheeler.....	5	5	55	46	9	.....	14,443,865	441,183	441,183
Wichita.....	9	11	174	151	23	.....	20,449,847	739,108	815,192
Winkler.....	3	3	83	74	9	.....	14,044,271	433,218	433,218
Other counties <sup>17</sup> .....	38	50	724	590	130	4	114,166,252	3,949,788	4,203,321
WEST VIRGINIA.....	24	78	894	774	120	.....	46,619,404	1,914,029	3,395,688
Kanawha.....	8	17	348	251	95	.....	17,805,496	764,177	1,644,166
Ritchie.....	5	12	43	43	.....	.....	1,149,906	32,877	32,877
Tyler.....	6	9	50	49	1	.....	892,928	35,432	35,432
Wetzel.....	7	9	167	150	17	.....	13,620,690	541,621	1,119,819
Other counties <sup>18</sup> .....	11	31	268	281	7	.....	13,350,384	539,922	563,394
WYOMING <sup>19</sup> .....	5	7	173	157	16	.....	30,684,892	1,565,148	1,567,890
COLORADO, MICHIGAN, MONTANA, AND NEW YORK <sup>20</sup> .....	5	5	42	34	8	.....	5,486,915	254,599	313,828

See footnotes at end of table.

## NATURAL GASOLINE

221

TABLE 65.—PRINCIPAL STATISTICS FOR THE NATURAL-GASOLINE INDUSTRY, BY STATE AND BY COUNTY: 1939<sup>1</sup>—Continued

[For producing operations only]

STATE AND COUNTY	PRINCIPAL EXPENSES DESIGNATED BELOW							COST OF BUILDINGS, MACHINERY, AND EQUIPMENT ERECTED OR INSTALLED DURING THE YEAR		
	Total	Wages	Salaries	Supplies and materials	Fuel	Purchased electric energy	Contract work	Total	Buildings	Machinery and equipment
UNITED STATES.....	<sup>3</sup> \$37,855,612	\$13,212,248	<sup>3</sup> \$5,051,939	\$8,652,948	\$6,600,147	\$354,702	\$3,983,628	\$13,029,885	\$1,460,464	\$11,569,421
ARKANSAS <sup>4</sup> .....	352,290	138,168	25,218	78,382	109,791	450	283	245,385	.....	245,385
CALIFORNIA.....	<sup>5</sup> 7,934,099	2,735,037	<sup>5</sup> 1,640,030	1,488,008	1,437,017	127,722	506,285	1,632,722	387,309	1,245,413
Fresno.....	382,911	123,493	15,615	127,910	57,653	4,041	54,199	143,704	.....	143,704
Kern.....	940,978	391,659	70,543	244,681	155,091	23,091	55,913	247,315	61,438	185,879
Kings.....	528,753	231,228	60,223	135,092	74,124	3,507	24,579	100,482	188	100,294
Los Angeles.....	3,797,905	1,321,058	781,185	559,219	769,492	58,423	308,528	1,026,098	258,727	767,371
Orange.....	771,048	314,597	81,723	192,076	167,667	14,537	448	27,977	1,695	26,282
Santa Barbara.....	332,859	123,268	14,580	66,747	77,691	13,005	37,568	58,319	51,484	6,835
Ventura.....	596,039	229,734	32,555	162,283	135,299	11,118	25,050	28,827	13,779	15,048
ILLINOIS.....	127,617	82,138	7,357	25,643	7,642	1,357	3,480	590,929	54,111	536,818
Crawford.....	36,369	25,144	.....	7,288	3,937	.....	.....	193	.....	193
Lawrence.....	8,315	5,838	.....	1,111	1,586	.....	.....	.....	.....	.....
Other counties <sup>6</sup> .....	82,933	51,356	7,357	17,244	2,139	1,357	3,480	590,736	54,111	536,625
KANSAS.....	775,707	321,482	65,439	152,024	202,731	9,301	24,730	181,674	9,459	172,215
Cowley.....	76,499	44,868	8,389	11,328	11,821	.....	97	1,932	208	1,728
Other counties <sup>7</sup> .....	699,208	276,618	57,050	140,696	190,910	9,301	24,633	179,742	9,253	170,489
KENTUCKY <sup>8</sup> .....	385,131	65,184	7,943	226,868	84,046	1,090	.....	11,197	3,094	8,103
LOUISIANA.....	<sup>9</sup> 1,592,768	495,068	<sup>9</sup> 349,325	407,826	194,145	12,334	133,070	698,622	51,278	647,344
Caddo.....	948,260	228,923	281,839	273,247	98,671	9,871	55,709	183,543	.....	183,543
Claiborne.....	161,480	77,319	4,360	45,752	32,145	1,883	.....	20,889	1,189	19,720
Other counties <sup>10</sup> .....	455,445	189,826	35,523	88,826	63,329	580	77,361	494,190	50,109	444,081
NEW MEXICO <sup>11</sup> .....	652,619	231,682	40,035	172,809	198,057	.....	10,038	163,712	.....	163,712
OHIO.....	<sup>12</sup> 279,053	125,986	<sup>12</sup> 19,557	60,170	46,539	60	26,721	36,745	2,554	34,191
Monroe.....	1,068	544	.....	185	339	.....	.....	.....	.....	.....
Other counties <sup>13</sup> .....	280,764	125,442	2,336	59,985	46,200	80	26,721	36,745	2,554	34,191
OKLAHOMA.....	7,819,733	3,316,033	933,757	1,669,568	1,569,173	61,567	269,835	674,580	95,485	579,095
Carter.....	201,763	103,238	13,463	43,779	40,271	170	844	16,950	.....	16,950
Creek.....	942,919	471,224	87,577	252,335	140,482	4,190	7,111	4,948	.....	4,948
Lincoln.....	102,665	57,314	3,065	22,122	17,503	.....	2,661	37,162	5,830	31,332
Oklahoma.....	1,508,169	679,339	117,625	239,053	403,474	36,890	31,788	119,039	11,141	107,898
Osage.....	1,055,978	495,049	65,844	235,735	228,359	574	30,417	119,539	3,818	115,721
Payne.....	44,083	23,272	2,200	3,308	5,624	1,579	8,100	108,594	5,000	103,594
Pontotoc.....	580,972	221,537	28,231	163,241	148,683	.....	19,280	63,495	39,972	23,523
Pottawatomie.....	604,012	178,496	17,970	167,409	117,761	4,573	117,613	82,786	20,695	62,091
Seminole.....	1,490,744	715,685	107,842	361,892	245,880	11,240	48,207	90,470	4,551	85,919
Tulsa.....	343,633	26,800	277,733	33,399	5,562	149	.....	75	.....	.....
Washington.....	171,568	9,137	158,731	550	3,148	.....	.....	.....	.....	.....
Other counties <sup>14</sup> .....	773,229	335,946	73,476	146,745	211,446	2,002	3,614	51,522	4,403	27,119
PENNSYLVANIA.....	475,393	155,486	19,555	46,715	235,810	5,566	12,281	36,465	4,964	31,501
Allgheny.....	84,243	30,920	10,911	8,166	33,850	396	.....	490	40	450
Butler.....	13,876	3,220	.....	1,338	9,318	.....	.....	.....	.....	.....
Clarion.....	3,926	2,780	.....	826	320	.....	.....	.....	.....	.....
Crawford.....	6,794	1,375	.....	905	4,491	23	.....	12	.....	12
Forest.....	15,143	6,958	.....	1,960	6,225	.....	.....	.....	.....	.....
Greene.....	142,221	31,612	2,580	9,877	98,152	.....	.....	.....	.....	.....
McKean.....	36,288	17,427	8,314	10,547	10,547	.....	.....	64	.....	64
Warren.....	60,668	12,792	1,500	7,038	26,911	166	12,261	2,904	.....	2,904
Other counties <sup>15</sup> .....	112,234	48,402	4,564	8,291	45,996	4,981	.....	32,995	4,924	28,071
TEXAS.....	<sup>16</sup> 14,056,885	4,325,758	<sup>16</sup> 1,595,682	3,286,179	1,866,095	127,015	2,876,158	8,270,283	820,378	7,449,905
Anderson.....	763,948	77,625	18,119	103,880	27,605	2,015	534,704	981,310	62,691	918,619
Carson.....	453,420	204,525	40,994	105,269	84,358	1,992	16,282	143,010	6,001	137,009
Eastland.....	552,672	282,430	80,454	90,908	91,911	5,547	1,422	6,400	97	6,303
Ector.....	454,612	162,391	33,486	173,137	58,598	1,235	25,765	248,347	16,599	231,748
Gray.....	1,065,794	447,849	116,778	276,364	103,322	14,690	106,791	452,894	11,076	441,818
Gregg.....	1,167,606	381,933	152,598	335,112	217,098	312	80,553	303,347	111,398	191,949
Harris.....	334,205	61,893	35,008	43,369	62,699	966	130,000	314,752	190,000	124,752
Hutchinson.....	1,263,535	457,398	126,116	380,755	174,435	15,656	109,175	623,214	16,561	606,653
Moore.....	271,291	123,802	12,912	58,311	45,764	28,972	1,530	49,269	372	48,897
Nueces.....	730,058	145,534	48,250	73,422	52,258	318	410,278	2,107,229	150,752	1,956,477
Rusk.....	1,426,352	366,010	170,666	611,414	208,524	1,274	70,464	167,593	48,800	118,793
Stephens.....	454,623	233,327	56,844	106,353	55,467	1,972	660	14,228	547	13,681
Ward.....	257,254	105,232	20,672	95,428	29,837	289	5,596	155,539	4,577	150,962
Wheeler.....	215,936	68,107	21,660	35,617	88,607	1,945	.....	138,325	19,641	118,684
Wichita.....	718,557	243,939	56,679	134,907	79,001	22,282	181,749	700,570	4,271	696,299
Winkler.....	117,317	20,650	39,887	61,764	1,935	13,925	36,574	.....	.....	36,574
Other counties <sup>17</sup> .....	3,409,039	846,444	321,111	602,046	426,557	25,617	1,187,264	1,827,682	176,995	1,650,687
WEST VIRGINIA.....	2,662,489	880,045	232,796	923,497	616,255	7,830	2,066	71,407	4,560	66,847
Kanawha.....	1,393,040	340,406	168,103	649,897	232,584	14	2,066	37,682	1,016	36,666
Ritchie.....	76,022	35,641	.....	21,424	15,957	.....	.....	.....	.....	.....
Tyler.....	76,781	31,651	10,276	11,011	23,841	.....	.....	.....	.....	467
Wetzel.....	528,859	182,684	37,612	159,287	153,019	5,256	.....	13,373	1,570	11,803
Other counties <sup>18</sup> .....	569,766	276,683	16,903	102,888	190,874	2,560	.....	19,685	1,374	17,711
WYOMING <sup>19</sup> .....	559,332	274,322	36,987	103,876	25,446	.....	118,701	422,923	25,804	397,124
COLORADO, MICHIGAN, MONTANA, AND NEW YORK <sup>20</sup> .....	114,841	44,863	10,605	31,383	27,400	590	.....	3,236	1,468	1,768

See footnotes at end of table.

## MINERAL INDUSTRIES

TABLE 65.—PRINCIPAL STATISTICS FOR THE NATURAL-GASOLINE INDUSTRY, BY STATE AND BY COUNTY: 1939<sup>1</sup>—Continued

[For producing operations only]

STATE AND COUNTY	Number of man-hours worked by wage earners	Gallons of natural gasoline produced per man-hour	Average hourly earning of wage earners	HORSEPOWER RATING OF PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY				Horsepower rating of electric motors driven by energy generated by reporting companies	ELECTRIC ENERGY CONSUMED (thousands of kw.-hrs.)		
				Total		Prime movers	Electric motors driven by purchased energy		Total	Purchased	Generated by reporting companies
				Aggregate	Per wage earner						
UNITED STATES.	16,633,710	128.8	\$0.79	772,302	92.7	757,583	14,719	26,493	165,975	37,012	128,963
ARKANSAS <sup>4</sup> .....	184,489	134.6	0.75	6,796	76.4	6,796	.....	8	142	11	131
CALIFORNIA.....	2,752,305	219.7	0.99	191,585	133.0	184,417	7,168	224	15,611	13,423	2,188
Fresno.....	122,696	435.5	1.01	4,683	79.4	4,666	17	.....	211	152	59
Kern.....	384,626	156.8	1.02	29,622	152.7	28,647	975	85	3,466	2,717	749
Kings.....	218,545	466.6	1.06	6,210	54.0	6,100	110	2	512	250	262
Los Angeles.....	1,348,986	186.7	0.98	97,207	138.5	93,942	3,265	11	6,268	5,943	325
Orange.....	321,901	173.9	0.98	21,243	116.7	20,232	1,011	126	2,562	1,889	693
Santa Barbara.....	125,235	98.2	0.98	12,227	191.0	11,150	1,077	.....	1,404	1,399	5
Ventura.....	230,316	298.4	1.00	20,393	163.1	19,680	713	.....	1,188	1,093	95
ILLINOIS.....	116,476	35.2	0.71	4,714	68.3	4,634	80	36	103	90	13
Crawford.....	39,325	35.2	0.64	1,150	50.0	1,150	.....	26	9	.....	9
Lawrence.....	11,779	38.5	0.48	168	18.4	168	.....	.....	1	.....	1
Other counties <sup>5</sup> .....	65,372	35.1	0.79	3,398	91.8	3,318	80	10	93	90	3
KANSAS.....	440,217	138.9	0.73	17,518	80.4	17,335	183	1,379	5,807	848	4,959
Cowley.....	54,666	71.7	0.82	2,825	100.9	2,825	.....	65	1,000	.....	1,000
Other counties <sup>6</sup> .....	385,551	148.5	0.72	14,693	77.3	14,510	183	1,314	4,807	848	3,959
KENTUCKY <sup>8</sup> .....	130,700	58.9	0.65	2,248	35.7	2,185	63	.....	117	47	70
LOUISIANA.....	640,460	145.8	0.77	29,887	85.6	29,696	191	617	3,699	690	3,009
Caddo.....	301,128	204.8	0.76	12,181	71.7	12,081	100	13	726	643	83
Claiborne.....	84,729	94.5	0.91	4,272	83.8	4,201	71	8	47	35	12
Other counties <sup>10</sup> .....	254,623	93.1	0.75	13,434	105.0	13,414	20	796	2,926	12	2,914
NEW MEXICO <sup>11</sup> .....	312,825	173.8	0.74	13,858	100.4	13,858	.....	662	4,204	.....	4,204
OHIO.....	161,626	46.3	0.76	3,092	37.7	3,089	3	.....	37	3	34
Monroe.....	1,092	23.4	0.50	90	90.0	90	.....	.....	.....	.....	.....
Other counties <sup>13</sup> .....	160,534	46.4	0.78	3,002	37.1	2,999	3	.....	37	3	34
OKLAHOMA.....	4,203,159	101.9	0.79	207,020	102.6	205,736	1,284	7,957	48,834	7,055	41,779
Carter.....	128,003	83.3	0.81	5,409	87.2	5,409	.....	100	298	9	289
Creek.....	578,174	88.9	0.82	17,719	82.2	17,614	105	587	3,270	344	2,926
Lincoln.....	69,494	61.9	0.82	3,017	81.5	3,017	.....	.....	156	.....	156
Oklahoma.....	928,998	118.8	0.73	57,555	142.8	57,065	490	639	9,469	5,193	4,276
Osage.....	669,122	84.6	0.74	29,018	91.0	29,018	.....	932	6,258	37	6,221
Payne.....	33,622	56.5	0.69	1,500	71.4	1,455	45	.....	142	142	.....
Pontotoc.....	238,373	168.4	0.93	18,959	155.4	18,959	.....	1,693	8,797	.....	8,797
Pottawatomie.....	209,616	154.4	0.85	8,889	87.0	8,829	40	219	987	400	587
Seminole.....	815,638	109.9	0.88	42,182	103.4	41,611	571	2,843	14,020	799	13,221
Tulsa.....	45,627	36.3	0.57	1,055	36.4	1,055	.....	.....	11	5	6
Washington.....	13,322	9.8	0.69	243	34.7	243	.....	5	11	.....	11
Other counties <sup>14</sup> .....	477,170	94.8	0.70	21,494	96.4	21,461	33	939	5,415	126	5,289
PENNSYLVANIA.....	218,885	56.9	0.71	4,956	37.0	4,699	257	581	703	250	453
Allegheny.....	41,905	21.2	0.74	325	14.8	320	5	.....	2	2	.....
Butler.....	4,475	37.5	0.72	300	37.5	300	.....	.....	.....	.....	.....
Clarion.....	4,000	17.3	0.70	145	48.3	145	.....	.....	.....	.....	.....
Crawford.....	1,904	89.3	0.72	199	86.3	199	.....	.....	5	1	4
Forest.....	11,063	20.7	0.63	252	50.4	252	.....	.....	.....	.....	.....
Greene.....	39,484	134.7	0.80	814	32.6	814	.....	.....	.....	.....	.....
McKean.....	24,076	13.1	0.72	760	44.7	760	.....	298	2	.....	2
Warren.....	19,546	72.8	0.65	1,198	99.8	1,185	13	285	450	3	447
Other counties <sup>15</sup> .....	72,432	53.3	0.67	963	24.7	724	239	.....	244	244	.....
TEXAS.....	5,837,892	130.3	0.74	248,228	89.7	242,905	5,323	13,091	74,576	13,738	60,838
Anderson.....	94,621	187.4	0.82	5,264	95.7	5,239	25	5	253	98	155
Carson.....	280,942	107.9	0.78	9,667	74.4	9,519	148	1,146	4,529	258	4,271
Eastland.....	419,874	80.1	0.87	10,705	54.9	10,564	141	531	3,202	498	2,704
Ector.....	228,062	89.8	0.71	10,218	101.2	10,218	.....	1,494	13,567	39	13,528
Gray.....	614,899	106.4	0.73	29,867	109.0	29,017	850	1,076	5,077	2,076	3,001
Gregg.....	528,512	203.7	0.72	27,709	108.2	27,709	.....	619	4,896	15	4,881
Harris.....	68,229	194.0	0.91	4,170	119.1	4,170	.....	.....	58	58	.....
Hutchinson.....	683,895	147.6	0.87	25,890	88.7	24,882	1,008	2,346	10,348	2,431	7,917
Moore.....	146,003	274.9	0.85	5,902	86.8	4,438	1,464	502	6,008	3,744	2,264
Nueces.....	183,089	257.4	0.79	11,303	127.0	11,303	.....	840	294	21	273
Rusk.....	403,086	199.7	0.91	20,026	95.8	20,026	.....	1,239	2,825	85	2,740
Stephens.....	319,970	95.1	0.73	10,771	75.3	10,741	30	86	1,271	124	1,147
Ward.....	110,053	204.8	0.96	10,924	188.3	10,924	.....	958	3,838	4	3,834
Wheeler.....	97,340	148.4	0.70	2,428	52.8	2,398	30	.....	198	162	36
Wichita.....	322,588	83.4	0.78	15,807	104.7	15,047	760	157	3,232	1,935	1,297
Winkler.....	145,011	96.8	0.81	2,400	32.4	2,400	.....	651	5,445	63	5,382
Other counties <sup>17</sup> .....	1,211,938	94.2	0.70	45,177	76.6	44,310	867	1,441	9,535	2,127	7,408

See footnotes at end of table.

TABLE 65.—PRINCIPAL STATISTICS FOR THE NATURAL-GASOLINE INDUSTRY, BY STATE AND BY COUNTY: 1939<sup>1</sup>—Continued

[For producing operations only]

STATE AND COUNTY	Number of man-hours worked by wage earners	Gallons of natural gasoline produced per man-hour	Average hourly earning of wage earners	HORSEPOWER RATING OF PRIME MOVERS AND ELECTRIC MOTORS DRIVEN BY PURCHASED ENERGY				Horsepower rating of electric motors driven by energy generated by reporting companies	ELECTRIC ENERGY CONSUMED (thousands of kw.-hrs.)		
				Total		Prime movers	Electric motors driven by purchased energy		Total	Purchased	Generated by reporting companies
				Aggregate	Per wage earner						
WEST VIRGINIA.....	1,275,477	36.6	0.69	21,146	27.3	20,996	150	1,063	6,799	835	5,964
Kanawha.....	495,696	35.5	0.69	14,293	56.9	14,293	.....	687	4,489	1	4,488
Ritchie.....	81,506	14.1	0.48	1,616	37.6	1,616	.....	.....	7	.....	7
Tyler.....	42,168	21.2	0.75	620	12.7	620	.....	.....	.....	.....	.....
Wetzel.....	283,396	48.1	0.68	1,953	13.0	1,849	104	376	1,847	525	1,322
Other counties <sup>18</sup> .....	372,911	35.8	0.74	2,664	9.5	2,618	46	.....	456	309	147
WYOMING <sup>19</sup> .....	292,048	105.1	0.94	19,452	123.9	19,452	.....	475	5,320	.....	5,320
COLORADO, MICHIGAN, MONTANA, AND NEW YORK <sup>20</sup> .....	67,131	81.7	0.67	1,802	53.0	1,785	17	.....	23	22	1

<sup>1</sup> For definition of the industry see table 51, footnote 1.<sup>2</sup> Companies with operations in more than 1 county or State are counted only once in the totals.<sup>3</sup> Includes statistics for central-office employees in Jackson County and St. Louis City, Missouri, and Multnomah County, Oregon.<sup>4</sup> Union County, 7 plants; Miller and Ouachita, 1 each.<sup>5</sup> Includes statistics for central-office employees in San Francisco County.<sup>6</sup> Marion County, 2 plants; Cumberland, Fayette, and Wabash, 1 each.<sup>7</sup> Greenwood County, 4 plants; Reno, 3; McPherson, 2; Barber, Kingman, Sedgwick, Seward, Stevens, and Sumner, 1 each.<sup>8</sup> Ohio County, 2 plants; Boyd, Clark, Lee, and Martin, 1 each.<sup>9</sup> Includes statistics for central-office employees in Ouachita County.<sup>10</sup> Webster County, 3 plants; Acadia, Bossier, Calcasieu, Evangeline, Jefferson, Jefferson Davis, and Lincoln, 1 each.<sup>11</sup> Lea County only.<sup>12</sup> Includes statistics for central-office employees in Franklin and Hancock Counties.<sup>13</sup> Washington County, 2 plants; Cuyahoga, Fairfield, Licking, Medina, Noble, Richland, and Wayne Counties, 1 each.<sup>14</sup> Nowata County, 4 plants; Noble, Okfuskee, and Pawnee, 3 each; Garfield, Hughes, Kay, Muskogee, Okmulgee, and Wagoner, 2 each; Beckham, Custer, Harmon, Logan, and Rogers, 1 each.<sup>15</sup> Venango County, 16 plants; Washington, 4; Armstrong, Beaver, and Elk, 1 each.<sup>16</sup> Includes statistics for central-office employees in Bexar, Dallas, Smith, and Tarrant Counties.<sup>17</sup> Jack, Shackelford, and Young Counties, 3 plants each; Brazoria, Brown, Henderson, Marion, Montgomery, Potter, Refugio, and Wilbarger, 2 each; Aransas, Archer, Austin, Calhoun, Callahan, Cass, Clay, Coleman, Comanche, Crane, Duval, Erath, Foard, Galveston, Houston, Liberty, Matagorda, Palo Pinto, Panola, Polk, Reagan, San Patricio, Shelby, Van Zandt, and Yoakum, 1 each.<sup>18</sup> Harrison and Lewis Counties, 4 plants each; Marion, Monongalia, and Pleasants, 3 each; Doddridge, Jackson, Lincoln, Roane, and Wood, 2 each; Brooke, Cabell, Clay, and Gilmer, 1 each.<sup>19</sup> Natrona County, 2 plants; Carbon, Fremont, Hot Springs, Niobrara, and Sweetwater, 1 each.<sup>20</sup> Colorado: Larimer and Las Animas Counties, 1 plant each; Michigan: Midland County, 1 plant; Montana: Glacier County, 1 plant; and New York: Cattaraugus County, 1 plant.TABLE 66. PRINCIPAL STATISTICS FOR SMALL NATURAL-GASOLINE PLANTS IN THE UNITED STATES, BY STATE: 1939<sup>1</sup>

[For producing operations only]

ITEM	United States	Pennsylvania	Illinois, Kansas, and Oklahoma
Number of operating companies.....	26	22	4
Number of plants <sup>2</sup> .....	28	24	4
Number of proprietors (not applicable to corporations).....	37	34	3
Performing manual labor.....	20	17	3
Number of wage earners (average for the year) <sup>3</sup> .....	8	7	1
Production of natural gasoline (gallons) <sup>4</sup> .....	167,513	110,196	57,317
Value of natural gasoline at plants <sup>4</sup> .....	\$7,526	\$5,625	\$1,901
Wages <sup>5</sup> .....	\$2,525	\$2,475	\$50
Prime movers: <sup>6</sup>			
Number of units.....	30	26	4
Horsepower rating.....	567	474	93

<sup>1</sup> Statistics cover producing natural-gasoline plants operated by concerns producing crude petroleum, natural gas, and natural gasoline and rendering oil- and gas-field services whose reports covering these activities indicated that neither the total value of products and services rendered, nor reported principal expenses, nor cost of buildings, machinery, and equipment during the year, nor cost of drilling and equipping oil wells, gas wells, and dry holes amounted to as much as \$2,500. For explanation of terms used see appropriate footnotes to table 51.<sup>2</sup> All were compression plants.<sup>3</sup> No salaried employees or salaries were reported.<sup>4</sup> No other products were reported.<sup>5</sup> No electric motors were reported.