

**OKLAHOMA GEOLOGICAL SURVEY**

Chas. N. Gould, Director

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Bulletin No. 40-AA

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**OIL AND GAS IN OKLAHOMA**

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**OKLAHOMA PETROLEUM—AN INDUSTRIAL SURVEY**

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By

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**NORMAN**

**MARCH, 1928**

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## OKLAHOMA PETROLEUM—AN INDUSTRIAL SURVEY

By

Charles E. Bowles

### ACKNOWLEDGMENTS

The statistics used in this report have been drawn from many sources and specific acknowledgment is hereby made to the United States Bureau of Mines, the United States Geological Survey, the Oklahoma Geological Survey, and the Oil and Gas Journal.

Further and general acknowledgment is also made for the cooperation of numerous corporations, publications, and individuals.

### OKLAHOMA'S PETROLEUM FUTURE SECURE

What will Oklahoma do when her oil plays out?

That question is almost certain to be asked whenever the State of Oklahoma comes up for discussion, providing, of course, the persons discussing the State live outside it, and especially if they live in a state that does not produce oil.

Of course, no one asks what an agricultural state will do when its soil plays out—because we all know that a farm can be operated for a thousand years and produce as much the last year as the first.

Not so, however, with oil. Unlike the soil, whose fertility may be indefinitely maintained—the forest that may be re-grown—or the supply of water for power that will perform the same task a million times, oil and gas are not “renewed”, at least so far as our present knowledge has determined.

Hence as Oklahoma's major industry has been so outstandingly petroleum, any one contemplating making this still-young State their future home may well ask, in all sincerity, “What about oil in Oklahoma tomorrow?”

From statehood in 1907 to the end of 1927, Oklahoma has ranked either first or second in both the output and value of the crude oil produced in the United States. For ten of these years, she has ranked first in production and for fourteen years first in value.

Out of this background of twenty-one years of marvelous development must come the answer to the question that is in the mind of the man who, whether he made “the run” in 1889, moved here several years ago, or is considering removing to Oklahoma, gives serious consideration to the question, “Will this virile State continue to give as abundantly as it has in the past?”

### FOREWORD

In 1917 the Oklahoma Geological Survey issued Bulletin 19, Part II, entitled “Petroleum and Natural Gas in Oklahoma.” This volume was so popular that the supply was soon exhausted, and for several years copies have not been obtainable.

The present Director has seen the need of a revision of this bulletin. On account of the lack of appropriations he has not been able to employ sufficient help to compile the data, and has called on some twenty representative geologists throughout the state to aid in the preparation of reports on separate counties. These gentlemen, all busy men, have contributed freely of their time and information in the preparation of these reports.

It will be understood that the facts as set forth in the various reports represent the observation and opinion of the different men. The Oklahoma Geological Survey has every confidence in the judgment of the various authors, but at the same time the Survey does not stand sponsor for all statements made or for all conclusions drawn. Reports of this kind, are at best, progress reports, representing the best information obtainable as of the date issued, and doubtless new data will cause many changes in our present ideas.

The present chapter has been prepared by Mr. C. E. Bowles, a petroleum analyst of Tulsa, now on the administrative staff of the Chamber of Commerce of the State of Oklahoma. Mr. Bowles is generally considered to be the best informed man in the State on the subjects concerning which he writes. For many years he has been interested in statistical and analytical matters connected with petroleum in Oklahoma. The present chapter is an epitome of many years of observation and experience.

CHAS. N. GOULD,  
Director

March, 1928.

The final conclusion of this paper may be anticipated and the question answered by two direct, specific, and undoubtedly accurate statements:

*First*—There is today not a single conclusive proof that Oklahoma will not continue, for many years, to be a large producer of crude oil and there is not a single conclusive proof that the oil industry will not continue to be one of the State's big industries.

*Second*—Both agriculture and manufacturing have been developing so rapidly, and have today gained such momentum, that even if Oklahoma's crude oil production were to reach its peak in the next several years and start on a slow decline, the other industries would be so large and so diversified that any "ebb" in the oil industry would be more than replaced.

In the following pages statistics have been used rather liberally, but only with the single idea of enabling the reader to visualize in a definite, concrete way just how the development of oil and gas in Oklahoma has been accomplished, and the part they have played and will undoubtedly continue to play in the development of the State.

#### BIRTH OF THE INDUSTRY IN OKLAHOMA

Probably the most direct cause leading to the birth of the oil industry in Oklahoma was the development of a small struggling industry in Kansas. Small though it was, this work stimulated the Cherokee, Choctaw, and Creek Indian Councils in the Indian Territory to take active steps to have their lands leased for prospecting for oil and gas. Hardships and privations, unknown today, were encountered in the drilling of a dozen scattered wells in this wild country had been set aside for the Indians and into which few white men came and to the land of which they could not acquire title.

Nearly all of the wells had showings of oil and gas, but nothing of any real importance was accomplished until, in the mid-summer of 1901, a little four-barrel well near Red Fork, a few miles from Tulsa, put Oklahoma on the front page of the newspapers of the United States.

Then came several years of scattered, but more or less definite, development in the northeast part of the Territory—and then, in December, 1905, Glenn Pool, Oklahoma's first big oil field, was discovered.

#### Three Early Great Fields

The flood of oil from Glenn Pool reached its peak at almost exactly the same time that Oklahoma was admitted into the Union. Then came the great Cushing field in 1912 with a peak of over three hundred thousand barrels a day in May, 1915—then the Healdton field with its biggest year in 1917.

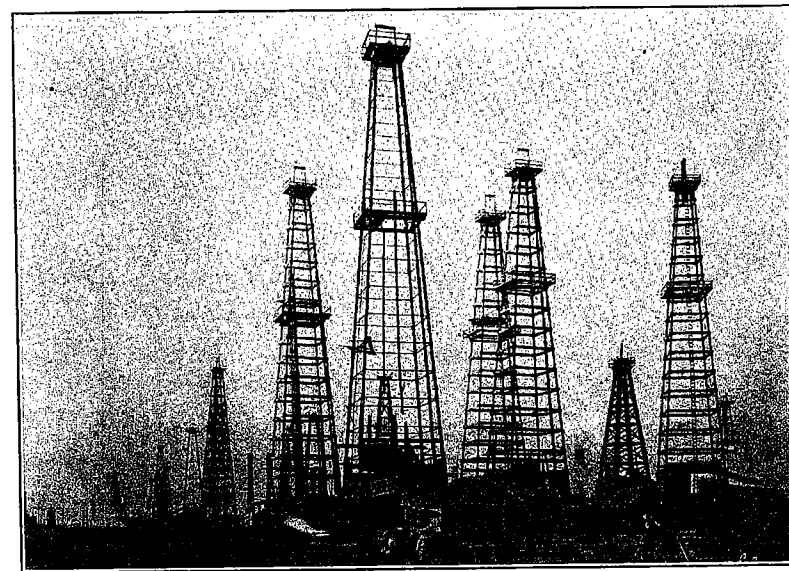
Table 1. Date of discovery and total production of largest Oklahoma fields to end of 1926.

POOL	DATE OF DISCOVERY	TOTAL PRODUCTION
Glenn Pool	Nov. 1905	195,000,000
Cushing	Mch. 1912	286,000,000
Healdton	Aug. 1913	140,000,000
Burbank	May 1920	126,000,000
Tonkawa*	June 1921	89,000,000
Wewoka	Mch. 1923	17,000,000
Cromwell	Dec. 1923	27,000,000
Garber	Apr. 1925	14,000,000
Seminole**	Mch. 1926	8,000,000

\*Deep sand discovered April 8, 1924.

\*\*Deep sand discovered July 16, 1926. To the end of November, 1927, the Greater Seminole field has produced a grand total of approximately 125,000,000 barrels of oil of about 42 gravity and of high gasoline content.

#### PLATE I



FIVE WELLS ON ONE LOCATION  
Garber field, Garfield County.

These three great, outstanding fields, that so definitely launched Oklahoma as an oil state, also associated the words "Oklahoma" and "Oil" so closely in the minds of the people of the entire country that, regardless of the State's future industrial development, it will probably never get away from its early and popular trade mark, "The Oil State."

After these three big fields came several years of steady, substantial growth in which the Okmulgee District had a large share. Then, in 1919, came the Hewitt field in southern Oklahoma, followed in 1920 by the Burbank field on the western edge of the Osage Indian Reservation.

Table 2. *Peak production of large fields.*

Illustrating, by data on representative big fields, how the production in all oil fields declines from the so-called "peak" production to what is usually called "settled" production. One of the oil industry's major accomplishments of recent years has been the rejuvenation of old fields and the accelerated production of new fields by the use of air and gas lifts and by water flooding.

FIELD	FIRST WELL	PEAK DATE	PEAK PRODUCTION	PRODUCTION END OF 1926
Glenn Pool	Nov. 1905	June 1907	117,000	11,300
Cushing	Mch. 1912	May 1915	305,000	21,400
Burbank	May 1920	July 1923	121,700	47,000
Tonkawa	Apr. 1924*	Sept. 1924	108,500	27,500
Garber	Apr. 1925	Nov. 1925	71,700	21,600

Note—The deep sand in Seminole field was discovered in July 1926—the peak of 527,000 barrels was reached July 30, 1927 from 636 wells. Production at the end of November, 1927 of Greater Seminole field was 415,000 barrels a day from 1,021 wells.

Tonkawa came in in 1921 and then a rapid succession of big fields—Bristow, Wewoka, Cromwell, Papoose, Garber, Braman, Davenport, and others—and, in the spring of 1926, the biggest of all—Seminole—that on July 30, 1927, produced 527,000 barrels of high gravity crude oil—and at the end of November, 1927, was producing 425,000 barrels a day. This is the largest daily production of any high gravity oil field in the world.

Verily, Oklahoma has had a baptism and a christening of "Oil."

#### The Osage Sales

But probably the most spectacular phase of the development of the industry in the State has been the auctioning off of 160-acre tracts in the Burbank part of the Osage Indian Reservation. From the first sale in 1912, to date, twenty-eight of these sales have been held and slightly over seven hundred thousand acres of land have been leased upon which bonuses of over one hundred million dollars have been paid by the oil companies. This bonus money, plus the royalty on the oil produced and gas produced, plus minor sources of revenue has poured a flood of gold into the laps of the Osage Indians that has made them "rich beyond the dreams of avarice."

So the world knows about Oklahoma and its prolific oil fields. And it thinks about Oklahoma in terms of oil.

#### OKLAHOMA COMPARED WITH OTHER STATES

Her production, the year she was admitted to statehood, was greater, by ten million barrels, than the best year of the best oil-producing state east of the Mississippi River.

On the Pacific Coast, California's best year, up to the time of Oklahoma's statehood, was four million barrels less than Oklahoma's production in 1907.

In the southwest, Kansas' best year, and the only year that she ever exceeded Oklahoma's 1907 production, was in 1917. Texas' best year, prior to 1907, fell fifteen million barrels short of Oklahoma's production in 1907.

#### REASON FOR OKLAHOMA'S STRATEGIC IMPORTANCE

Thus we have the unusual spectacle of Oklahoma entering the Union in 1907 with not only the largest production of any state that year, but a production far in excess of what any other state had produced in any year up to that time.

Obviously this fact had tremendous influence on the early development of the state—a great constructive influence of which practically every other industry and line of development has been, either directly or indirectly, the beneficiary.

Prior to the drilling of the little four-barrel well at Red Fork in 1901 the United States had produced a billion barrels of oil. Since that time, the United States has produced over eight billion barrels—a grand total of well over nine billion barrels.

Of this huge amount Oklahoma has produced two billion barrels.

But the story of oil is not told in terms of barrels. Oil is merely "raw material" and its value depends upon what is made out of it.

Herein, then lies the real significance of Oklahoma's strategic position that she has held for twenty years and that, from present indications, she will continue to hold for long years to come.

At the present time the refineries that are handling crude oil produced in Oklahoma are getting about the following out of the average barrel: gasoline 50.0 per cent, kerosene 8.5 per cent, fuel oil 33.0 per cent, lubricating oil 2.5 per cent, other products and refining losses 6.0 per cent.

In 1926 Oklahoma produced, in round numbers, 180,000,000 barrels of crude oil. As about fifty per cent of gasoline was made from it, this means that from the crude oil produced in Oklahoma in 1926 approximately ninety million barrels of gasoline were made. As the production of refinery gasoline in the United States in 1926 was, in round numbers, three hundred million barrels, it follows that from the crude

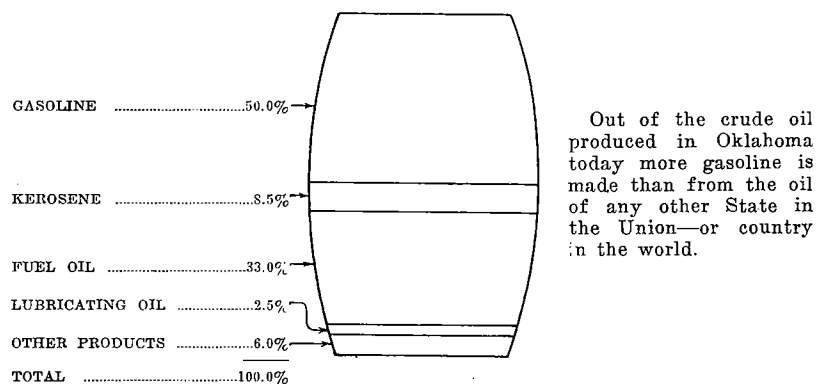


Figure 1. The products obtained by the refining of an average barrel of Oklahoma crude oil.

oil produced in Oklahoma approximately thirty per cent of all of the refinery gasoline of the United States was made.

This amazing fact is one of several reasons for Oklahoma's strategic position in the oil industry of the United States today.

As the production of crude oil throughout the world in 1926 was slightly over one billion barrels, of the United States about seven hundred seventy million barrels, and of Oklahoma almost one hundred eighty million barrels, it follows that Oklahoma furnished, last year, almost eighteen per cent of the world output and over twenty-three per cent of the output of the United States.

Since the development of the Cushing field fifteen years ago, Oklahoma has been famous as a producer of "high grade" oil which by general interpretation means oil from which a large percentage of gasoline can be recovered.

#### How Quality Affects Price

Some idea of how the average quality of oil produced in different states varies, and how this variation is reflected in its price, is revealed by the following tabulation comparing the two greatest oil-producing states, Oklahoma and California, for 1926:

Item	California	Oklahoma
Crude produced, bbls.	224,673,000.00	179,195,000.00
Value at well	\$345,547,000.00	\$413,900,000.00
Value per barrel	1.54	2.31
Gasoline content, per cent	22	50
Fuel Oil content, per cent	70	33

Since oil was first produced in Oklahoma the State has produced a total of two billion barrels. It took until about the mid-summer of 1920 to produce the first billion barrels and only six and a half years to produce the second billion. The first billion barrels were worth, at the wells, one billion dollars and the second billion barrels almost two billion dollars.

Of these three billion dollars of "new wealth" the great bulk remained in Oklahoma and most of it was used in further developing the oil industry. A vast amount went into the development of other industries in the State. A total of more than sixty million dollars, in gross production taxes alone, has been paid into the State Treasury.

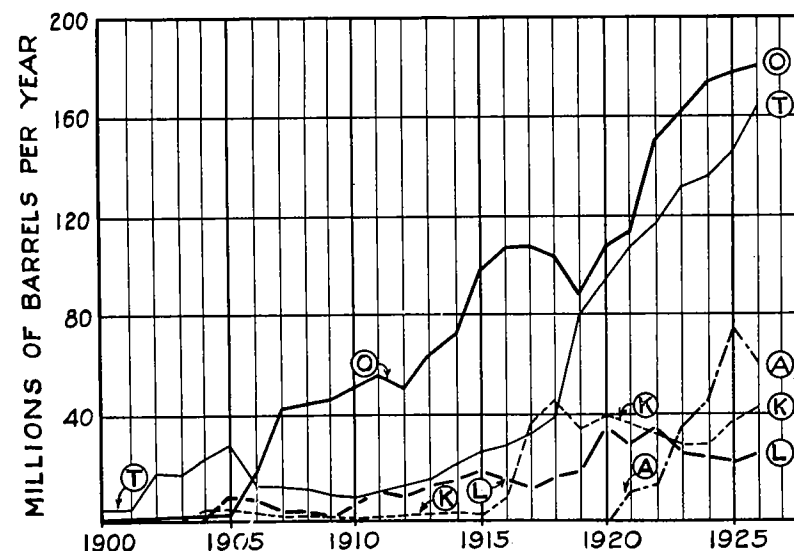


Figure 2. Graph of oil production of principal oil producing states.  
O-Oklahoma; T-Texas; A-Arkansas; K-Kansas; and L-Louisiana.

#### Drilling Wells in Oklahoma

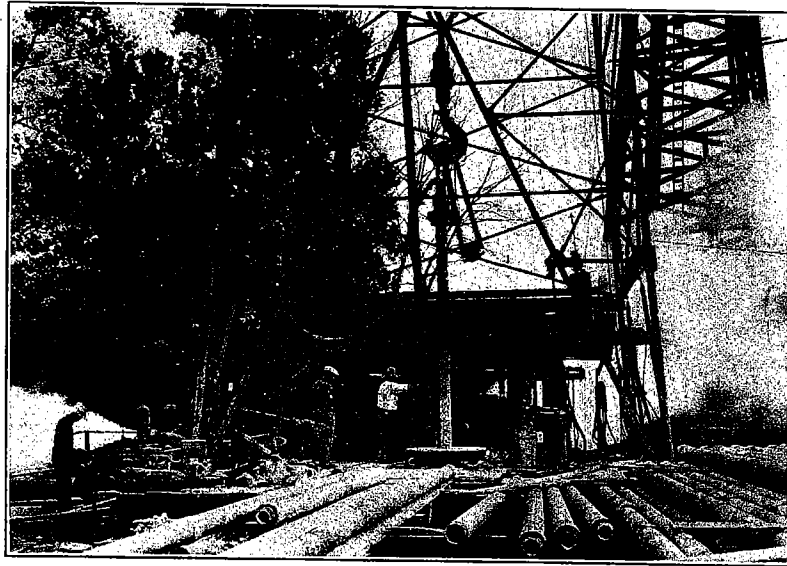
Referring to Table 3, it is interesting to note that since the beginning of the industry in Oklahoma a total of slightly over 125,000 wells have been drilled of which over 25,000 were dry holes. These dry holes easily cost a half billion dollars.

Of all the wells drilled in Oklahoma almost exactly 25 per cent have been dry holes. However, taking the last five years shown in Table 3, almost 29 per cent were dry holes. When the Bartlesville area was being developed 20 years ago the wells were practically all shallow and cheap. Today practically all of the wells drilled in Oklahoma are

deep and costly. It is currently stated that the average well in the Seminole field costs, completed, around \$75,000. This money would have drilled more than a dozen wells 20 years ago.

Again referring to Table 3 we find that, from the beginning, something over 90,000 wells have been completed as "oil" wells. According to the Oil and Gas Journal, on Dec. 31, 1926, there were 60,440 producing oil wells in Oklahoma. This means that out of all of the wells completed as oil wells, from the beginning of the industry in Oklahoma, two-thirds of them were still producing Dec. 31, 1926.

### PLATE II



A ROTARY DRILLING WELL  
Running casing.

If, in Oklahoma since the fall of 1913, every well completed as an oil well were still producing oil, the total would be about 60,000 oil wells—or as many as are producing oil in Oklahoma today. But, obviously, thousands of the wells completed as oil wells since the fall of 1913 have ceased flowing. Hence to "account for" these thousands of wells that have ceased flowing since 1913 there must be thousands of wells drilled before 1913 that are still flowing. The old Red Fork well, drilled in 1901, is still producing a little oil—likewise the well, drilled in 1898, near Bartlesville.

And if a "roll call of old oil wells" in Oklahoma were made it would be surprising how many of them were ten, fifteen, and twenty years old.

Table 3. Wells drilled in Oklahoma from 1900 to 1926, with amount of production of oil, gas, and natural gasoline.

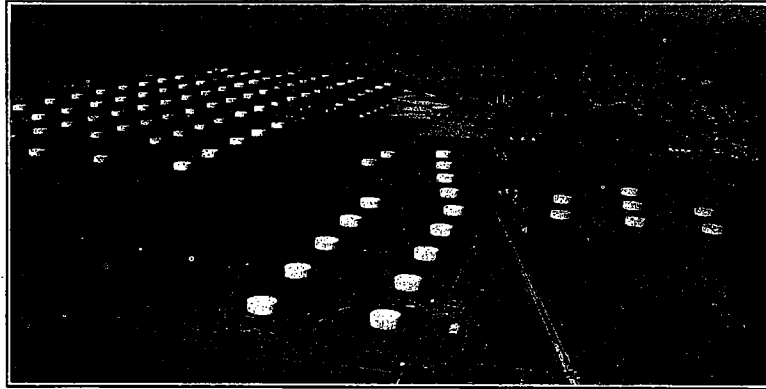
YEAR	WELLS COMPLETED				Crude Oil Produced Barrels	Natural Gas Produced M. Cubic Feet	Natural Gasol. Produced Gallons
	Total	Oil	Gas	Dry			
1900					7,554		
1901					10,000		
1902					37,100		
1903		110			138,911		
1904	361	243	21	97	1,366,748		
1905	2,510	2,059	98	353	6,466,200		
1906	2,779	2,268	163	348	18,003,600	3,520,396	
1907	3,956	3,490	148	318	43,524,128	4,867,031	
1908	2,844	2,458	102	284	45,798,785	11,924,574	
1909	3,279	2,742	157	380	47,859,218	28,036,976	
1910	4,370	3,622	201	547	52,028,718	50,429,646	
1911	4,445	3,465	364	615	56,069,637	67,275,608	388,058
1912	5,982	4,718	444	820	51,427,071	73,799,319	1,575,644
1913	9,131	7,225	589	1,317	63,579,384	75,017,668	6,462,968
1914	8,297	6,444	529	1,324	73,631,724	78,167,414	17,277,555
1915	4,603	3,407	350	846	97,915,243	87,516,753	31,665,991
1916	7,700	6,205	359	1,136	107,071,715	123,517,385	148,359,602
1917	6,676	4,988	397	1,291	107,507,471	137,384,154	115,123,424
1918	8,367	5,514	753	2,100	103,347,070	124,317,179	163,700,550
1919	8,171	5,186	718	2,267	86,911,000	163,649,000	189,995,038
1920	9,097	6,303	758	2,035	106,206,000	154,467,000	162,761,829
1921	5,715	3,538	670	1,507	114,634,000	124,058,000	195,960,900
1922	6,148	4,149	571	1,428	149,571,000	140,631,000	189,403,670
1923	5,833	3,515	587	1,731	160,929,000	203,082,000	270,249,000
1924	4,814	3,038	468	1,308	173,538,000	214,452,000	301,062,000
1925	4,978	2,929	471	1,478	176,768,000	249,285,000	390,861,000
1926	5,352	3,119	498	1,735	179,272,000		
Total	125,408	90,626	9,416	25,366	2,023,620,000	2,115,398,103	2,084,847,229

It is most obvious that had Oklahoma not been an oil-producing state, her marvelous growth and her present remarkable development would have required at least two generations instead of coming within the active lifetime of thousands of those who launched her in 1890 as a Territory and in 1907 as a State.

## Development of Pipe Lines and Storage

Especially in the earlier history of Oklahoma each successive "wave" of big production has been followed by big increases in the building of storage, of pipelines, and of refineries.

## PLATE III



AIR VIEW OF TANK FARM AT PONCA CITY

Prior to the bringing in of Glenn Pool, the Prairie's pipeline carried the oil to refineries to the north and east. Their pipeline system connected, near Whiting, Indiana, with other great systems that finally ended on the Atlantic seaboard. Glenn Pool caused the building of two eight-inch lines from that area to refineries on the Gulf of Mexico. Cushing and the later big fields have resulted in the building of two ad-

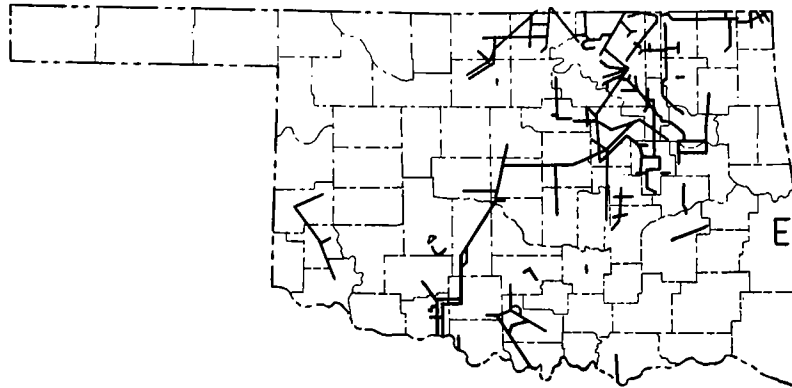


Figure 3. Map showing natural gas pipelines in Oklahoma, furnishing cheap fuel to cities and towns of the State.

ditional lines to the north and more lines to the Gulf, to say nothing of frequent increases in the capacity of the lines first laid down by the different companies. The necessity for this is clearly indicated by Oklahoma's production of forty-three million barrels in 1907, and likewise almost one hundred eighty million barrels in 1926.

Today there are over nineteen thousand miles of oil pipe line in Oklahoma of which, in May, 1926, almost eleven thousand miles were gathering lines (four inches in diameter or smaller) for gathering oil from individual wells and over eight thousand miles were trunk lines (usually eight-inch) for transporting the oil from leases to tank farms or refineries. To fill these 19,180 miles of pipe line with crude oil would require over 2,600,000 barrels. This "oil in transit", at the average price of Oklahoma crude in 1926 was worth over \$6,000,000.

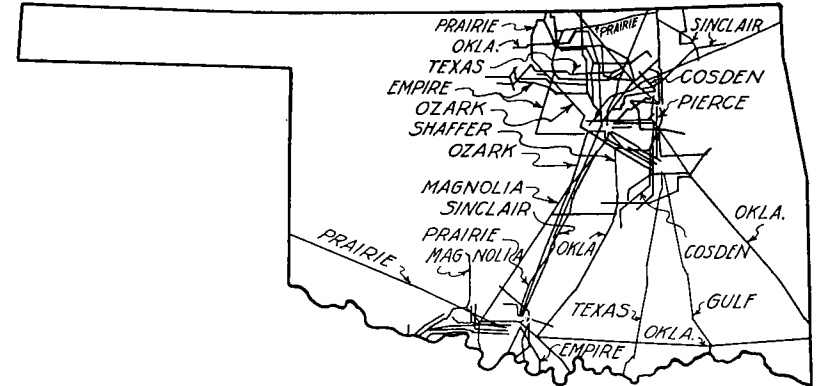


Figure 4. Map showing location of pipelines in Oklahoma and their ownership. These lines represent an important aspect of industrial Oklahoma.

Inseparable from the pipeline is the storage tank—the "shock absorber"—when new, big fields come in and produce crude oil faster than the refineries can handle it. Some idea of the provision that the oil industry has made for storing its "raw material" can be had from the fact that in May, 1926, the aggregate tank farm storage for crude oil, in Oklahoma, was over 117,000,000 barrels. In addition to this crude storage there was a total of almost 23,000,000 barrels for the storage of refined products—gasoline, kerosene, fuel oil, etc.

This means that in May, 1926, there was a grand total of slightly over 140,000,000 barrels of storage available for crude oil and its refined products.

Some idea of the high quality of the crude oil produced in Oklahoma, and the necessity for storing it in vapor-tight tanks, can be had from the fact that of the State's total storage capacity for crude oil 99.9 per cent is steel storage, while the average for the United States, outside of Oklahoma, is less than 77 per cent.



### Growth in Refining

There are in Oklahoma today about fifty refineries that can be rated as "operating" plants. They range all the way from a few hundred barrels to thirty-five thousand barrels daily capacity and have a combined capacity of around two hundred sixty thousand barrels of crude oil a day.

The refining industry in Oklahoma has undergone a rapid evolution in the last few years and few of the once numerous "skimming" plants remain, at least in the sense that they were called skimming plants ten years ago. Instead, we have greatly enlarged refineries a number of which represent investments running well up into the millions of dollars.

### PLATE IV



INDEPENDENT OIL & GAS COMPANY'S REFINERY  
Okmulgee, Oklahoma.

The refining industry in Oklahoma has very definitely passed from the small plant to the large plant—from relatively simple equipment to complicated equipment of the highest type—from the skimming plant that in 1909 recovered slightly over ten per cent of gasoline from the crude to the "cracking" plant that in 1926 helped to push the total recovery up to at least fifty per cent of gasoline.

### Natural Gas and Natural Gasoline

But oil is not all of the "oil" industry—it also includes both the natural gas and the natural gasoline industries.

While natural gas is usually transported and distributed to consumers by public service companies, the gas itself is usually produced by the oil industry. Oklahoma is today producing more natural (dry) gas than any other state in the Union—twenty-one per cent of the total for the United States. Also its natural gasoline plants are making more natural gasoline from the dry gas from natural gas wells and the wet (casing-head) gas from oil wells than any other state in the Union—thirty-six per cent of the total for the United States in 1925.

Today practically every cubic foot of wet gas produced in Oklahoma is run through natural gasoline plants and "wrung dry" of its gasoline content. Some idea of the amount of real liquid gasoline, but in vapor form, that is contained in the invisible gas from gas wells and from oil wells in Oklahoma can be gotten from the fact that in 1926 over forty million dollars worth of "natural" gasoline was made from this source. From the first records of this new industry (1911) to the end of 1926 a total of over two hundred fifty-five million dollars worth of this kind of gasoline has been made in the State.

The production of natural gas in Oklahoma has grown at about the same rate as the production of crude oil. The value of the present production, at the point of consumption, has averaged, during recent years, around twenty-five million dollars a year.

From the first records of natural gas in Oklahoma, in 1906, to the end of 1926, the total value of the output, at the point of consumption, was about two hundred ninety-five million dollars. Thus, the "gas" end of the "oil" industry has added something like five hundred fifty million dollars to the three billion dollars received for the crude produced in Oklahoma.

### Vast Deposits of Asphalt

While asphalt is not so directly connected with crude oil as are casing-head and natural gas, the asphalt deposits that are so widely distributed throughout southern Oklahoma are nevertheless a part of the oil industry and should be taken into account in any discussion of the State's petroleum resources.

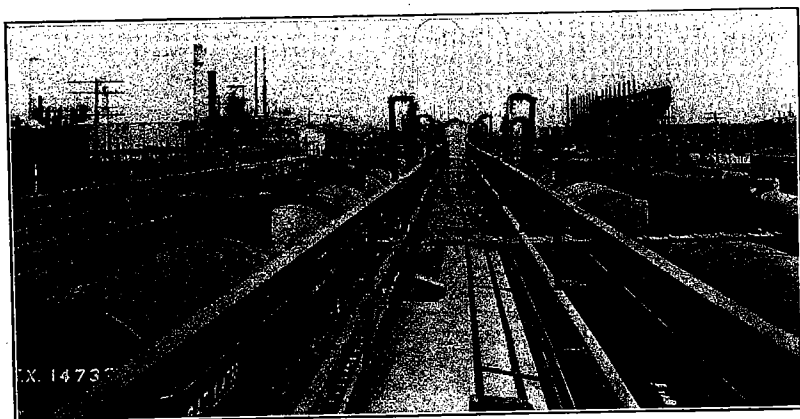
The Oklahoma Geological Survey has estimated that these deposits contain "unnumbered millions of tons of asphalt—enough to furnish paving material for all the streets and public roads of Oklahoma." In the report of the United States Bureau of Mines for 1924 the output of "native" asphalt is put at about eighteen thousand tons with a value of eighty thousand dollars. This negligible development of this vast resource only serves to emphasize the future possibilities of Oklahoma asphalt when the situation becomes favorable for developing these deposits.

### INVESTMENT IN PETROLEUM INDUSTRY IN OKLAHOMA

Probably no clearer general conception could be gotten of the oil and gas industry in Oklahoma than from a brief summary of the industry's approximate investment in the State today. Easily fifteen million acres of land are under oil and gas lease and are classified as producing, offset, prospective, and wildcat. This land, together with the oil and gas wells and equipment, drilling tools, supplies, houses, etc., represent probably one and a quarter billion dollars. Gathering lines and trunk lines for crude oil, transmission lines, and distributing lines for natural gas (6,464 miles in 1926), pumping stations for oil and compression stations for gas, storage tanks and tank farms with equipment and supplies easily represent three hundred fifty million dollars. Refineries, natural gasoline plants, tank cars, marketing stations, etc., represent at least two hundred million dollars.

The foregoing summary totals one billion, eight hundred million dollars—and it is undoubtedly a very conservative estimate of the oil industry, as "a going concern", in Oklahoma.

### PLATE V



LOADING RACKS AT A LARGE OKLAHOMA REFINERY  
Mid-Continent Petroleum Corp., Tulsa.

### PETROLEUM OUR MOST VALUABLE MINERAL

According to the United States Bureau of Mines, the value of the crude oil produced in Oklahoma in 1926 was \$413,900,000. A rough estimate places the value of the natural gas produced at around forty-two million dollars and of natural gasoline at around forty-one million dollars. This gives a total of about four hundred ninety-seven million dollars.

In the same year the value of all the other minerals produced in the State—zinc, lead, coal, gypsum, stone, gravel, granite, clay products, etc., was around eighty-two million dollars. This, added to the value of crude oil, gas, and gasoline listed in the preceding paragraph, gives a grand total of five hundred sixty-nine million dollars of "mineral" wealth produced in Oklahoma in 1926.

In this connection it is interesting to note that the value contributed by the petroleum industry (crude oil, natural gas, and natural gasoline) was over 85 per cent of the total mineral value produced in 1926—and that the combined value of the output of lead, zinc, coal, etc., was less than 15 per cent of the total mineral value.

#### Royalties, Rentals, Bonuses, and Taxes

The owners of the land (usually farmers) on which oil and gas are produced receive a royalty (usually one-eighth) of the value of the oil and gas produced on their property. In 1926 the royalties paid on oil produced in Oklahoma amounted to approximately fifty-two million dollars.

Probably five million dollars a year is being paid to land owners as bonuses when leases are made on their lands and at least thirteen million dollars a year is being paid out on leases that have not yet produced oil or gas.

The estimated total from these royalties, bonuses, and rentals for the State of Oklahoma in 1926 was in the neighborhood of seventy million dollars. And a large part of this goes directly to the farm to be used for its improvement and frequently to pay off the mortgage.

In 1926 the three per cent gross production tax levied by the State on the value, at the well, of the crude oil produced, brought in over ten million dollars. Two-thirds of this money goes to the State, the remainder to the counties where the tax originated.

In addition to this gross production tax the industry also pays very substantial amounts in the form of ad valorem taxes.

#### Salaries, Wages, Supplies, and Equipment

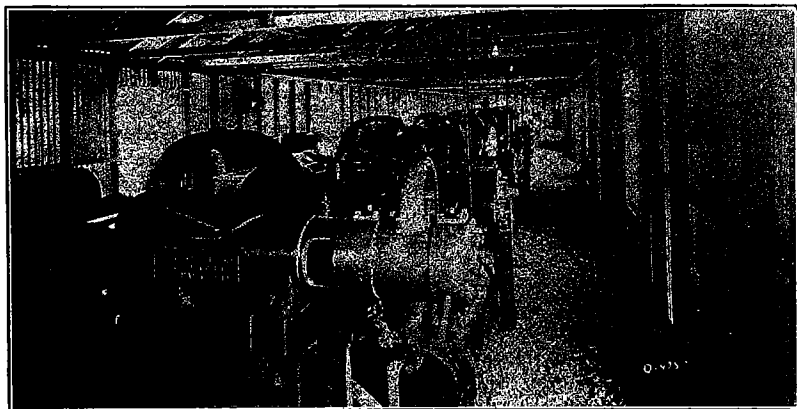
The crude oil producing end of the industry is spending easily one hundred fifty million dollars a year in Oklahoma in the drilling of an average of something over five thousand wells a year in the search for oil and gas. To this must be added a great many more millions for labor, repairs, supplies, etc., for operating the sixty thousand producing wells in the State.

The pipeline companies are also spending millions of dollars a year in operating their present properties, making repairs, replacements, etc., to say nothing of the demand, every day in the year, for making connections to new oil and gas wells.

For the last several years in Oklahoma there has been a daily average of more than ten new wells, either oil or gas, that had to be connected up to a pipe line system that would ultimately deliver the oil to a refinery or the gas to a consumer.

Refineries, natural gasoline plants, the handling of thousands of tank cars, and the operation of hundreds of drive-in filling stations and curb pumps throughout the State call for many more millions of dollars a year for labor, equipment, repairs, supplies, etc.—and especially for improvements. No other end of the industry is making more rapid advancement than is being made today in refining, and especially cracking, and in the making of natural gasoline—and there is no place where good equipmet is so quickly rendered obsolete by better equipment.

#### PLATE VI



AIR COMPRESSORS IN A FLOWING PLANT  
Carter Oil Co., Seminole field.

All of these things call for the expenditure, every year, of huge sums of money a large part of which remains within the State, touching and stimulating every other industry, business, and activity.

No other industry in Oklahoma is today "putting back" anything like the amount of money into the assurance of an unending supply of its "raw material" and into improvements in procuring, processing, transporting, and marketing its products.

#### OKLAHOMA'S INDUSTRY FUNDAMENTALLY SOUND

To those, then, who have marveled at Oklahoma's growth and development but who, knowing what a large part was traceable to "oil", have been just a little uncertain as to whether oil would continue to be one of the State's big industries, no more convincing assurance can be given than the inescapable conclusion that not only, for long

years to come, will her oil and gas continue to rank among her big industries, but that long before any measurable shrinkage could reasonably come, agriculture and manufacturing will have grown to such proportions that the economic balance of the State will not be disturbed and the oil industry will have fully adjusted itself to the change.

Table 4. Refineries and Natural Gasoline Plants in Oklahoma.

COMPANY AND PLANT ADDRESS	FIELD LOCATION	TYPE OF PLANT	DAILY CAPACITY GALLONS
A. C. F. Gasoline Co., Box 1561, Tulsa.....	Sec. 4-18-7	Comp.	750
Akin Gasoline Co., Box 1403, Tulsa.....	Sec. 9-26-13	Absp.	600
Akin Gasoline Co., Box 1403, Tulsa.....	Sec. 3-16-13	Comp.	600
Altitude Petroleum Co., Tulsa Trust Bldg., Tulsa	Oilton	Absp.	*3,000
Amerada Petroleum Corp., Ardmore.....	Sec. 20-5s-1e	Absp.	3,500
Amerada Petroleum Corp., Tonkawa.....	Sec. 34-25n-1w	Absp.	12,000
Amerada Petroleum Corp., Yeager.....	Sec. 18-8n-10e	Absp.	3,000
Amerada Petroleum Corp., Healdton.....	Sec. 31-2s-2w	Absp.	15,000
Amerada Petroleum Corp., Okmulgee.....	Sec. 13-12n-11e	Absp.	7,500
Amerada Petroleum Corp., Wewoka.....	Sec. 5-7n-8e	Absp.	7,500
Amerada Petroleum Corp., Earlsboro.....	Sec. 16-9n-5e	Absp.	22,500
Amerada Petroleum Corp., Seminole.....	Sec. 15-8n-6e	Absp.	†15,000
Amerada Petroleum Corp., Seminole.....	Sec. 23-9n-6e	Comp.	5,000
Amity Gasoline Co., Alluwe.....	Alluwe	Comp.	4,500
Amity Gasoline Co., Dewey.....	Dewey	Comp.	1,500
Amity Gasoline Co., Mounds.....	Mounds	Comp.	350
Arrew Gasoline Co., Broken Arrow.....	25-18-14	Comp.	1,500
Arthur Oil Co., Sapulpa.....	Sapulpa	Comp.	1,000
Atlantic Oil Producing Co. Box 426, Okemah.....	Sec. 36-12n-10e	Absp.	1,800
Atlantic Oil Producing Co., Box 8, Bristow.....	Sec. 16-14n-10e	Absp.	3,000
Aztec Oil Co., Ingalls.....	Sec. 22-19-4	Absp.	*5,000
Aztec Oil Co., Jenks.....	Sec. 35-18-12	Comp.	1,500
Aztec Oil Co., Henryetta.....	Sec. 6-11-12	Absp.	2,500
Barco Gasoline Co., Wirt.....	Wirt	Comp.	2,000
Barnsdall Oil Co., R. R. No. 8, Tulsa.....	Sec. 5-20-12	Absp.	2,500
Barnsdall Oil Co., Osage.....	Sec. 20-21-9	Absp.	2,000
Barnsdall Oil Co., Avant.....	Sec. 18-23-12	Absp.	2,400
Barnsdall Oil Co., Beggs.....	Sec. 6-14-12	Absp.	6,000
Barnsdall Oil Co., Phillipsville.....	Sec. 23-14-11	Comp.	2,800
Barnsdall Oil Co., Barnsdall.....	Sec. 29-25-11	Absp.	3,000
Barnsdall Gas Co., Okemah.....	Sec. 15-10-9	Comp.	†1,500
Boynton Gasoline Co., Boynton.....	Boynton	Comp.	500
Bradstreet, J. G. & Co., Muskogee.....	Muskogee	Comp.	300
Burgess Gasoline Co., Nowata.....	Collinsville	Absp.	1,000
Carter Oil Co., Burbank.....	Burbank	Absp.	16,000
Carter Oil Co., Hewitt.....	Hewitt	Absp.	10,000
Carter Oil Co., Oilton.....	Oilton	Absp.	6,000
Carter Oil Co., Cromwell.....	Cromwell	Absp.	17,000
Carter Oil Co., Cromwell.....	Cromwell	Absp.	32,000
Carter Oil Co., Seminole.....	Seminole	Absp.	15,000
Carter Oil Co., Seminole.....	Seminole	Absp.	60,000
Carter Oil Co., Seminole.....	Seminole	Absp.	50,000
Chase Gasoline Co., Muskogee.....	Muskogee	Comp.	1,000
Chase Gasoline Co., Muskogee.....	Muskogee	Comp.	2,000
Chesney, Chas., Gasoline Co., Box 857, Okmulgee	Okmulgee	Absp.	500
Chestnut & Smith Corp.....	Kiefer	A-C	3,000
Chestnut & Smith Corp. (2).....	Morris	A-C	20,500
Comar Gasoline Co. (Marland and Roxana), Tonkawa.....	Sec. 10-24n-1w	Absp.	16,000
Comar Gasoline Co., Tonkawa.....	Sec. 2-24n-1w	Absp.	24,000
Comar Gasoline Co., Tonkawa.....	Sec. 3-25n-1w	Absp.	3,000
Comar Gasoline Co., Tonkawa.....	Sec. 28-25n-1w	Absp.	8,000
Crosbie & Gillespie, Kiefer.....	Kiefer	Comp.	7,500
Crosbie & Gillespie, Stonebluff.....	Stonebluff	Comp.	600
Cushing Refining & Gasoline Co., Blackwell.....	Blackwell	Absp.	10,000
Cushing Refining & Gasoline Co., Ripley.....	Ripley	Absp.	8,000
Denver Producing & Refining Co., Okmulgee.....	Okmulgee	Absp.	1,000
DeSoto Gasoline Co., Muskogee.....	Sec. 5-14-8	Comp.	500
Devonian Oil Co., Chickasha.....	Sec. 32-7n-6w	Absp.	2,000
Devonian Oil Co., Kellyville.....	Sec. 22-17n-10e	Absp.	7,500
Devonian Oil Co., Tulsa.....	Sec. 22-10n-12e	Absp.	3,000
Devonian Oil Co., Stroud.....	Sec. 34-15n-6e	Absp.	*5,000

Table 4. Refineries and Natural Gasoline Plants in Oklahoma, Cont'd.

COMPANY AND PLANT ADDRESS	LOCATION FIELD	TYPE OF PLANT	DAILY CAPACITY GALLONS
Dewey Portland Cement Co., Dewey.....	Dewey	A-C	2,000
Diamond Refining Co., Delaware.....	Sec. 29-27-16	Comp.	3,000
Diamond Refining Co., Ochelata.....	Ochelata	Absp.	800
Diamond Refining Co., Jenks.....	Jenks	Comp.	600
Eagle Gasoline Co., Kiefer.....	Kiefer	Comp.	3,000
Eagle-Picher Lead Co., Henryetta.....	Sec. 6-11-13	Absp.	5,000
Elm Oil Co., Tulsa.....	Sec. 13-14-14	Comp.	300
Empire Gasoline Co., Tallent.....	Sec. 35-25-10e	Absp.	10,000
Empire Gasoline Co., Okemah.....	Sec. 16-11-11e	Absp.	6,500
Empire Gasoline Co., Burbank.....	Sec. 12-27-5e	A-C	8,000
Empire Gasoline Co., Seminole.....	Sec. 24-9-6e	Absp.	30,000
Empire Gasoline Co., Seminole.....	Sec. 24-9-6e	Absp.	20,000
Empire Gasoline Co., Seminole.....	Sec. 14-8-6e	A-C	160,000
Enfisco Oil Corp., Court Arcade Bldg., Tulsa.....	Sec. 17-17-13	Comp.	4,000
Enfisco Oil Corp., Court Arcade Bldg., Tulsa.....	20-17-13	Comp.	500
Foster & Davis, Bartlesville.....	Osage	Comp.	900
Foster, Dean E., 304 New Wright Bldg., Tulsa.....	Sec. 27-27-3w	Absp.	15,000
Foster Petroleum Corp., Bartlesville.....	Sec. 13-21-8	Absp.	2,500
Four Gasoline Co., Box 1561, Tulsa.....	Sec. 22-17-13	Comp.	500
Franchot, D. W., & Co., Box 1561, Tulsa.....	Sec. 17-17-12	Comp.	500
Gilliland Oil Co., Shamrock.....	Shamrock	Absp.	15,000
Gilliland Oil Co., Barnsdall.....	Barnsdall	Absp.	5,000
Gilmore, Forest E., Co., Mannford.....	Sec. 14-19-8	Absp.	4,000
Gilmore, Forest E., Co., Kellyville.....	Sec. 1-17n-10e	Absp.	110,000
Gilmore, Forest E., Co., Kellyville.....	Sec. 21-9n-10e	Absp.	18,000
Gilmore, Forest E., Co., Wetumka.....	Glenn Pool	Comp.	2,000
Glenn Gas Co., Glenn Pool.....	Jennings	Absp.	2,500
Glomar Gasoline Co., Jennings.....	Mannford	Comp.	250
Glomar Gasoline Co., Mannford.....	Oakhurst	Absp.	1,800
Glomar Gasoline Co., Oakhurst.....	Sec. 12-14-15	Absp.	1,500
Grimes Gasoline Co., Haskell.....	Sec. 6-19-10	Absp.	1,500
Grimes Gasoline Co., Keystone.....	Sec. 2-10-9	Absp.	2,000
Grimes Gasoline Co., Okemah.....	Sec. 35-10-9	Absp.	5,000
Grimes Gasoline Co., Okemah.....	Sec. 35-10-9	Absp.	1,000
Grimes & Gillespie, Tulsa.....	Sperry	Comp.	48,100
Gypsy Oil Co., Kiefer.....	Sec. 16-17-12	Comp.	2,300
Gypsy Oil Co., Jenks.....	Sec. 20-18-13	Comp.	4,500
Gypsy Oil Co., Cleveland.....	Sec. 34-21-8	Comp.	10,200
Gypsy Oil Co., Drumright.....	Sec. 5-17-7	Comp.	9,200
Gypsy Oil Co., Shamrock.....	Sec. 10-16-7	Comp.	8,100
Gypsy Oil Co., Cleveland.....	Sec. 1-21-7	Absp.	10,600
Gypsy Oil Co., Shidler.....	Sec. 32-27-6	Absp.	19,700
Gypsy Oil Co., Three Sands.....	Sec. 2-24-1w	Absp.	33,800
Gypsy Oil Co., Shidler.....	Sec. 24-27-5e	Absp.	4,900
Gypsy Oil Co., Bristow.....	Sec. 3-14n-8e	Absp.	5,000
Gypsy Oil Co., Davenport.....	Sec. 11-14n-5e	Absp.	37,000
Gypsy Oil Co., Earlsboro.....	Sec. 16-9-5e	Absp.	3,000
Phillips Petroleum Co., Bartlesville.....	Sec. 12-25-11	Absp.	10,000
Phillips Petroleum Co., Pershing.....	Sec. 6-24-10	Absp.	4,000
Phillips Petroleum Co., Stroud.....	Sec. 12-14-6	Absp.	3,000
Phillips Petroleum Co., Norfolk.....	Sec. 1-18-5	Absp.	5,000
Phillips Petroleum Co., Beggs.....	Sec. 11-15-12	Absp.	12,000
Phillips Petroleum Co., Bryant.....	Sec. 24-11-11	Absp.	31,000
Phillips Petroleum Co., Wewoka.....	Sec. 33-8-8	Absp.	32,000
Phillips Petroleum Co., Wetumka.....	Sec. 3-9-9	Absp.	26,000
Phillips Petroleum Co., Wetumka.....	Sec. 33-11-8	Absp.	4,000
Powers, M. F., Depew.....	Depew	Comp.	2,000
Powers & Quinlan, Rt. 2, Box 22, Beggs.....	Beggs	Comp.	8,000
Powers & Quinlan, Rt. 2, Box 22, Beggs.....	Beggs	Comp.	8,000
Pure Oil Co., Drumright.....	Sec. 32-18-7	Comp.	5,500
Pure Oil Co., Drumright.....	Sec. 32-19-7	Comp.	8,000
Pure Oil Co., Healdton.....	Sec. 11-4-3	Comp.	4,000
Pure Oil Co., Depew.....	Sec. 5-15-8	Comp.	1,000
Pure Oil Co., Okmulgee.....	Sec. 7-13-13	A-C	20,000
Pure Oil Co., Seminole.....	Sec. 26-9-6	A-C	120,000
Pure Oil Co., Seminole.....	Sec. 14-8-6	A-C	120,000
Romart Gasoline Co., Burbank.....	Sec. 31-27n-6e	Comp.	1,200
Rotary Gasoline Co., Tulsa.....	Sec. 11-21n-12e	Comp.	1,200
Roxana Petroleum Corp., Yale.....	Sec. 18-19n-6e	Absp.	7,000
Roxana Petroleum Corp., Stroud.....	Sec. 1-14n-6e	Absp.	3,500
Roxana Petroleum Corp., Drumright.....	Sec. 8-17n-7e	Absp.	3,500
Roxana Petroleum Corp., Covington.....	Sec. 18-22n-3w	Comp.	10,000
Roxana Petroleum Corp., Mannford.....	Sec. 18-19n-9e	Absp.	1,500
Sand Springs Home, Box 277, Sand Springs.....	Sec. 4-19-7	Comp.	3,000
Sand Springs Home, Box 277, Sand Springs.....	Sec. 6-19-12	Absp.	3,000

Table 4. Refineries and Natural Gasoline Plants in Oklahoma, Cont'd.

COMPANY AND PLANT ADDRESS	FIELD LOCATION	TYPE OF PLANT	DAILY CAPACITY GALLONS
Shaffer Oil & Refining Co., Mehan.....	Mehan	Absp.	6,000
Shaffer Oil & Refining Co., Shamrock.....	Shamrock	Absp.	4,000
Shaffer Oil & Refining Co., Drumright.....	Drumright	Absp.	4,000
Shaffer Oil & Refining Co., Kellyville.....	Kellyville	Absp.	2,000
Signal Gasoline Co., Inc., Bristow.....	Bristow	Absp.	4,000
Signal Gasoline Co., Inc., Bristow.....	Bristow	Absp.	4,000
Silurian Oil Co., Avant.....	Sec. 17-23-12	Comp.	2,000
Sinclair Oil & Gas Co., Cleveland.....	Sec. 35-21-8e	Comp.	4,500
Sinclair Oil & Gas Co., Drumright.....	Sec. 28-18-7e	Comp.	8,500
Sinclair Oil & Gas Co., Shamrock.....	Sec. 28-17-7e	Comp.	14,500
Sinclair Oil & Gas Co., Haskell.....	Sec. 23-15-14e	Comp.	2,000
Sinclair Oil & Gas Co., Stonebluff.....	Sec. 5-16-15e	Comp.	500
Sinclair Oil & Gas Co., Covington.....	Sec. 19-22-3w	Absp.	60,000
Sinclair Oil & Gas Co., Hominy.....	Sec. 9-23-8e	Comp.	4,000
Sinclair Oil & Gas Co., Shidler.....	Sec. 29-27-6e	Absp.	40,000
Sinclair Oil & Gas Co., Cromwell.....	Sec. 4-10-8e	Absp.	25,000
Sinclair Oil & Gas Co., Seminole.....	Sec. 35-9-6	Absp.	80,000
Sinclair Oil & Gas Co., Seminole.....	Sec. 22-9-6	Comp.	10,000
Skelly Oil Co., Wynona.....	Sec. 24-24-9	Comp.	7,000
Skelly Oil Co., Slick.....	Sec. 15-15-10	Absp.	11,000
Skelly Oil Co., Bristow.....	Sec. 15-14-8	Absp.	5,000
Skelly Oil Co., Bristow.....	Sec. 4-15-9	Absp.	3,200
Skelly Oil Co., Maramec.....	Sec. 15-20-6	Absp.	5,000
Sklily Oil Co., Davenport.....	Sec. 7-15-6	Char.	1,500
Skelly Oil Co., Davenport.....	Sec. 2-14-5	Absp.	7,250
Skelly Oil Co., Lyman.....	Sec. 11-27-5	Absp.	28,500
Smith, T. K., Skiatook.....	Skiatook	A-C	500
Southland Gasoline Co., Oilton.....	Sec. 33-19-7	Comp.	3,000
Southland Gasoline Co., Sapulpa.....	Sec. 19-18-12	Comp.	1,500
Southwest Pipe Line Co., Bristow.....	1 mile north of Bristow	Absp.	2,000
Standard Oil Co. of Indiana.....	Sec. 4-18n-7e	Comp.	15,840
Standard Oil Co. of Indiana.....	Sec. 21-17n-7e	Comp.	17,680
Standard Oil Co. of Indiana.....	Sec. 34-18n-7e	Comp.	20,064
Standard Oil Co. of Indiana.....	Sec. 4-16n-7e	Comp.	6,300
Star Gasoline Co., Sapulpa.....	Eram	Absp.	800
Stebbins Oil & Gasoline Co., Inola.....	Sec. 9-19-16	Absp.	500
Stebbins Oil & Gasoline Co., Boynton.....	Sec. 17-14-16	Comp.	200
Sterling Oil & Gas Co., 418 Citizens National Bank Bldg., Abilene, Tex.....	Sec. 1-21-11	Absp.	600
Test Gasoline Co., Bartlesville.....	Dewey	Comp.	3,000
The Texas Company, Drumright.....	Sec. 16-17n-7e	Comp.	9,510
The Texas Company, Kiefer.....	Sec. 8-17n-12e	Comp.	13,365
The Texas Company, Oilton.....	Sec. 9-18n-7e	Comp.	4,610
The Texas Company, Preston.....	Sec. 11-14n-12e	Comp.	2,363
The Texas Company, Haskell.....	Sec. 22-15n-14e	Comp.	3,153
The Texas Company, Beggs.....	Sec. 22-15n-11e	Absp.	4,620
The Texas Company, Beggs.....	Sec. 29-15n-14e	Comp.	1,875
The Texas Company, Osage.....	Sec. 35-21n-8e	Comp.	11,200
The Texas Company, Davenport.....	Sec. 2-14n-5e	Absp.	804
The Texas Company, Jenks.....	Sec. 2-18n-12e	Comp.	10,000
Tidal Chelsea Refining Co., Chelsea.....	Sec. 4-24n-17e	Absp.	3,000
Tidal Chelsea Refining Co., Chelsea.....	Sec. 7-25n-17e	Absp.	3,000
Tidal Refining Co., Drumright.....	Sec. 8-17n-7e	Absp.	15,000
Tidal Refining Co., Ochelata.....	Sec. 12-24n-12e	Comp.	3,000
Tidal Refining Co., Glenn Pool.....	Sec. 14-17n-13e	Absp.	15,000
Tidal Refining Co., Garber.....	Sec. 7-22n-3w	Comp.	1,500
Tidal Refining Co., Bartlett.....	Sec. 36-12n-13e	Comp.	2,500
Tidal Refining Co., Keystone.....	Sec. 24-20n-9e	Absp.	2,000
Tiger Mountain Oil Co., Youngstown.....	Sec. 36-14-11	Comp.	5,000
Tiger Mountain Oil Co., Bartlett.....	Sec. 35-12-13	Comp.	2,500
Transcontinental Oil Co., Box 2067, Tulsa.....	Sec. 1-25n-16e	Comp.	500
Transcontinental Oil Co., Box 2067, Tulsa.....	Sec. 22-13-14	Absp.	5,000
Transcontinental Oil Co., Box 2067, Tulsa.....	Sec. 28-15-14	Absp.	2,500
Transcontinental Oil Co., Box 2067, Tulsa.....	Sec. 24-25-16	Comp.	1,000
Transcontinental Oil Co., Box 2067, Tulsa.....	Sec. 11-13-14	Comp.	1,500
Transcontinental Oil Co., Box 2067, Tulsa.....	Sec. 27-16-9	Absp.	9,000
Transcontinental Oil Co., Box 2067, Tulsa.....	Sec. 1-14-15	Comp.	1,000
Triumph Gasoline Co., Morris.....	Sec. 12-14-14	Comp.	1,400
Twin State Oil Co., Quay.....	Quay	Comp.	2,000
United States Zinc Co., Henryetta.....	Henryetta	Absp.	2,000
Valley Osage Oil Co., Sapulpa.....	Sec. 21-18-11	Comp.	1,500
Victor Gasoline Co., Box 272, Bristow.....	Bristow	Comp.	2,000
Victor Gasoline Co., Box 272, Bristow.....	Bristow	Absp.	6,000
Victor Gasoline Co., Box 1625, Drumright.....	Drumright	Comp.	4,000

Table 4. Refineries and Natural Gasoline Plants in Oklahoma, Cont'd.

COMPANY AND PLANT ADDRESS	FIELD LOCATION	TYPE OF PLANT	DAILY CAPACITY GALLONS
Victor Gasoline Co., Box 152, Davenport.....	Davenport	Absp.	6,000
Victor Gasoline Co., Box 7, Covington.....	Covington	Comp.	3,000
Victor Gasoline Co., Seminole.....	Seminole	Comp.	†10,000
Warner-Caldwell Oil Co., Nowata.....	Sec. 36-26-14	Absp.	200
Warner-Caldwell Oil Co., Nowata.....	Sec. 7-26-16	Absp.	300
Warner-Caldwell Oil Co., Nowata.....	Sec. 1-25-16	Absp.	1,000
Warner-Caldwell Oil Co., Nowata.....	Sec. 17-26-17	Absp.	500
Warner-Caldwell Oil Co., Nowata.....	Sec. 19-26-16	Absp.	200
Watchorn Oil & Gas Co., Morrison.....	Sec. 33-23-3e	Absp.	*15,000
Wentz, L. H., Ponca City.....	Sec. 21-28n-1e	Comp.	5,000
Wentz, L. H., Ponca City.....	Sec. 34-25n-1w	Absp.	15,000
Wilcox Oil & Gas Co., Beggs.....	Sec. 30-15-11	Comp.	2,500
Wilcox Oil & Gas Co., Bristow.....	Sec. 32-15-8	Absp.	3,500
Wilcox Oil & Gas Co., Slick.....	Sec. 33-15-10	Absp.	2,500
Wiser Oil Co., Bartlesville.....	Sec. 31-25n-17e	Comp.	1,000
Wiser Oil Co., Bartlesville.....	Sec. 27-27n-13e	Comp.	3,000
Wolverine Petroleum Corp., Avant.....	Sec. 12-23n-11e	Comp.	600
Wolverine Petroleum Corp., Copan.....	Sec. 32-28n-13e	Comp.	1,000
Wolverine Petroleum Corp., Bartlesville.....	Sec. 26-28n-13e	Comp.	2,000
Wolverine Petroleum Corp., Bartlesville.....	Sec. 13-26n-12e	Comp.	1,000
Wolverine Petroleum Corp., Wilson.....	Sec. 21-45-2w	Absp.	1,000
Wolverine Petroleum Corp., Avant.....	Sec. 24-24n-11e	Comp.	6,500
Worley & Jones, Okmulgee.....	Okmulgee	Absp.	500
Wright, J. H., Sapulpa.....	Sec. 24-17n-10e	Absp.	4,000
Hales & Cassidy, Cushing.....	Cushing	Absp.	2,000
Harland Oil Co., Wolco.....	Sec. 2s-24-11	Absp.	3,000
Harland Oil Co., Barnsdall.....	Sec. 20-25-11	Absp.	3,000
Harlis Oil & Gas Co., Avant.....	Sec. 18-23-12	Comp.	1,500
Henderson Co., Nowata.....	Sec. 17-16-15	Absp.	10,000
Highway Oil Refining Co., Lynch Bldg., Tulsa.....	Sec. 20-19n-12e	Comp.	500
Highway Oil Refining Co., Lynch Bldg., Tulsa.....	Sec. 21-16n-15e	Comp.	600
Hilditch, John, Tulsa.....	Hallett	Absp.	3,000
Independent Oil & Gas Co., Seminole.....	Sec. 26-9-6	Absp.	25,000
Invader 50 Well Syndicate, Muskogee.....	Sec. 33-14-17	Comp.	500
Junior Refining Co., Okmulgee.....	6-13-12	Absp.	1,800
Lane Gasoline Co., Nowata.....	Nowata	Comp.	500
Lane Gasoline Co., Nowata.....	Okemah	Absp.	800
Lone Star Gas Co., Hollis.....	Hollis	Absp.	†10,000
Magnolia Petroleum Co., Cushing.....	9-17n-7e	Comp.	2,436
Magnolia Petroleum Co., Cushing.....	8 and 9-18n-7e	Comp.	2,430
Magnolia Petroleum Co., Cushing.....	7-18n-7e	Comp.	3,000
Magnolia Petroleum Co., Cushing.....	2 and 3-18n-7e	Comp.	710
Magnolia Petroleum Co., Cushing.....	3 and 4-16n-7e	A-C	2,270
Magnolia Petroleum Co., Cushing.....	27-17n-7e	Comp.	925
Magnolia Petroleum Co., Cushing.....	29-18n-5e	Comp.	460
Magnolia Petroleum Co., Davenport.....	34-15n-5e	A-C	4,660
Magnolia Petroleum Co., Davenport.....	3-14n-5e	Absp.	1,450
Magnolia Petroleum Co., Davenport.....	Davenport	A-C	750
Magnolia Petroleum Co., Duncan.....	19-13n-8e	A-C	3,000
Magnolia Petroleum Co., Earlsboro.....	26-9n-6e	A-C	350
Magnolia Petroleum Co., Fox.....	33-1s-3w	A-C	350
Magnolia Petroleum Co., Graham.....	23-2s-3w	Comp.	4,800
Magnolia Petroleum Co., Healdton.....	4-14s-3w	Comp.	280
Magnolia Petroleum Co., Healdton.....	15-14s-3w	Comp.	300
Magnolia Petroleum Co., Healdton.....	16-14s-2w	Comp.	725
Magnolia Petroleum Co., Morrison.....	5-22-3w	A-C	1,890
Magnolia Petroleum Co., Okmulgee.....	1-11n-13e	Comp.	73
Magnolia Petroleum Co., Wewoka.....	32-8n-8e	Comp.	1,740
Magnolia Petroleum Co., Wewoka.....	5-7n-8e	Comp.	3,580
Magnolia Petroleum Co., Yale.....	6-19n-6e	Comp.	165
Magnolia Petroleum Co., Yale.....	17-20n-6e	A-C	2,850
Magnolia Petroleum Co., Yale.....	27-19n-4e	Comp.	550
Marland Refining Co., Ponca City.....	Sec. 33-25n-2e	A-C	18,000
Marland Refining Co., Blackwell.....	Sec. 1-26n-2w	A-C	4,500
Marland Refining Co., Three Sands.....	Sec. 15-25n-2w	Absp.	4,200
Marland Refining Co., Blackwell.....	Sec. 6-26n-1w	Absp.	2,200
Marland Refining Co., and Mid-Continent Petroleum Corp., Garber.....	Sec. 13-22n-4w	A-C	7,000
Masoneal Gasoline Co., Osage.....	Sec. 23-21-8	A-C	1,800
Masoneal Gasoline Co., Copan.....	Sec. 33-28-13	Absp.	900
McMan Oil & Gas Co., Tonkawa.....	Three Sands	Absp.	8,000
Midco Oil Corp., Box 2085, Tulsa.....	Oilton	Comp.	4,000
Midco Oil Corp., Box 2085, Tulsa.....	Drumright	Comp.	250
Midco Oil Corp., Box 2085, Tulsa.....	Dewey	Comp.	1,800
Midco Oil Corp., Box 2085, Tulsa.....	Billings	Comp.	1,000

Table 4. Refineries and Natural Gasoline Plants in Oklahoma, Cont'd.

COMPANY AND PLANT ADDRESS	FIELD LOCATION	TYPE OF PLANT	DAILY CAPACITY GALLONS
Mid-Continent Petroleum Corp., Bethel.....	Sec. 17-9-8	Absp.	5,000
Mid-Continent Petroleum Corp., Covington.....	Sec. 13-22-4n	Absp.	25,000
Mid-Continent Petroleum Corp., Leonard.....	Sec. 15-10-8	Absp.	50,000
Mid-Continent Petroleum Corp., Leonard.....	Sec. 28-17-14	Comp.	5,000
Mid-Continent Petroleum Corp., Morris.....	Sec. 12-13-13	Absp.	5,000
Mid-Continent Petroleum Corp., Okmulgee.....	Sec. 19-13-13	Comp.	3,000
Mid-Continent Petroleum Corp., Shamrock.....	Sec. 22-17-7	Absp.	15,000
Mid-Continent Petroleum Corp., Stonebluff.....	Sec. 5-16-15	Comp.	3,000
Mid-Continent Petroleum Corp., Tulsa.....	Sec. 28-20-12	Absp.	5,000
Mid-Continent Petroleum Corp., Weleetka.....	Sec. 4-9-11	Absp.	6,000
Mid-Continent Petroleum Corp., Stroud.....	Sec. 8-15-6	Absp.	6,000
Mid-Kansas Oil & Gas Co., Petroleum Bldg., Tulsa.....	Sec. 15-27n-5e	Absp.	5,000
Moon Gasoline Co., Box 267, Bixby.....	Bixby	Comp.	3,000
Moon Gasoline Co., Box 36, Rt. 4, Muskogee.....	Muskogee	Comp.	2,000
M. T. C. Oil & Gas Co. (and Elbucan Oil Co.), Tulsa.....	Mehan	A-C	7,000
National Oil & Development Co., Tulsa.....	Bartlesville	Comp.	2,000
National Products Co., Cleveland.....	Cleveland (2)	Absp.	2,000
National Products Co., Mounds.....	Mounds	Absp.	*500
National Products Co., Terlton.....	Terlton	Absp.	1,400
National Products Co., Oilton.....	Oilton (2)	Absp.	2,000
National Products Co., Slick.....	Slick	Absp.	2,000
Noble Oil & Gas Co., Quay.....	Quay	Absp.	1,500
Oil State Gasoline Co., Jenks.....	Sec. 17-18-13	Comp.	1,500
Oil State Gasoline Co., Beggs.....	Sec. 7-14-12	Comp.	1,200
Oil State Gasoline Co., Yale.....	Sec. 13-19-5	A-C	3,000
Oklahoma Gasoline Plants, Inc., Sapulpa.....	Sec. 18-18n-7e	Absp.	5,500
Okmulgee Producers & Manufacturers Gas Co., Okmulgee.....	Sec. 13-12-13	Absp.	500
Orfic Gasoline Co., Cleveland.....	Sec. 18-21-8	Comp.	2,500
Orfic Gasoline Co., Jennings.....	Sec. 3-19-7	Absp.	2,500
Owen Gasoline Co., Barnsdall.....	Sec. 19-24-11	Absp.	3,000
Owen Gasoline Co., Owen.....	Sec. 29-19-13	Absp.	10,000
Peppers Gasoline Co., Box 858, Enid.....	Sec. 24-22-4w	Absp.	3,000
Phillips Petroleum Co., DeNoya, Enid.....	Sec. 6-24-10	Absp.	44,000
Phillips Petroleum Co., Shidler.....	Sec. 26-27-5	Absp.	45,000
Phillips Petroleum Co., Shidler.....	Sec. 16-27-5	Absp.	42,000
Phillips Petroleum Co., Shidler.....	Sec. 14-27-5	Comp.	22,000
Phillips Petroleum Co., Fairfax.....	Sec. 21-25-6	Comp.	2,000