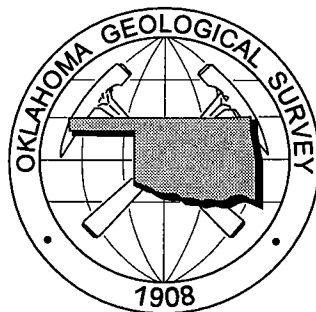
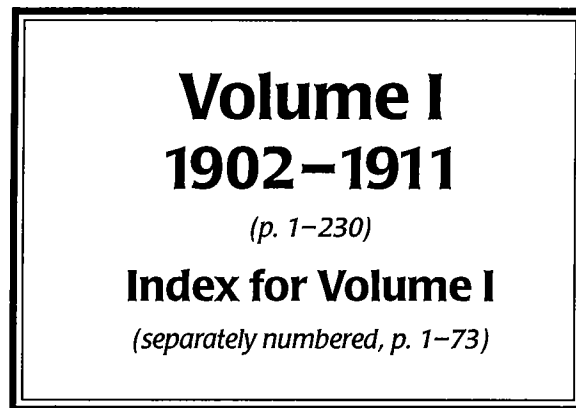


Early History of Oil and Gas in the Southern Midcontinent and Other Areas

From *The Oil & Gas Journal* (or from *The Oil Investors' Journal*,
The Truth and Nothing But The Truth...), 1902–1915.
Vol. I, 1902–1911. Vol. II, 1912–1915.

Compiled by
Robert O. Fay



Open-File Report 8-97

Oklahoma Geological Survey
Norman, Oklahoma

1997

Early History of Oil and Gas in the Southern Mid-Continent and other areas, from The Oil & Gas Journal, 1902-1915, or The Truth and Nothing But The Truth. Vol. I, 1902-1911. Vol. II, 1912-1915. By Robert Oran Fay, Oklahoma Geological Survey, Norman, OK. June, 1992.

The following history is an abridgement of short articles published in The Oil & Gas Journal, beginning in 1902, and chronologically documented and cross indexed. Each volume and number is listed chronologically, followed by the page number and article, so that these volumes can be used to document the original citations in The Journal.

The Journal began in 1902 at Beaumont, Texas, as the "Oil Investors' Journal. The Truth and Nothing But The Truth...", Vol. 1, No. 1, May 24, 1902, published semi-monthly, at \$1.00 a year, or 5¢ a copy. The early years of The Journal were mostly devoted to the Gulf Coast, following the Spindletop discovery of 1901. In 1906, articles began to appear concerning the Mid-Continent, following discoveries of the Glenn Pool in Tulsa, Ok., and the Caddo Pool in Louisiana. About March 5, 1907, The Journal moved an office to Tulsa, Ok., in the Turner Building. On June 16, 1910, the main office was moved to 15 E. 3rd St., in Tulsa, Ok., and the title was changed to "The Oil and Gas Journal". It was published weekly, and the price was \$3.00 a year.

The purpose of the present study was to find out something about the discovery wells of each field, and about the people who drilled the wells, in addition to the interrelationships of economics, politics, laws, trusts, bankruptcies, imports, wars, boom and bust, unions, and other factors in the development of the oil business. With the advent of the Model T Ford in 1909, the airplane in 1903, and the use of oil in diesel engines, ships, and locomotives, there was a great demand for oil.

On December 4, 1911, John Davidson Rockefeller stepped down permanently as head of the Standard Trust. For many years, his company controlled 98 percent of the oil in the Mid-Continent and 86 percent of the oil in the United States. The year 1912 was the beginning of a new era in the oil business, with the formation of many new companies, and with the hiring of many geologists. For this reason, Volume I was concluded at the end of 1911. The cross index to Volume I includes pages 1-230.

Volume II begins with p. 230. In 1912, the giant Cushing Field was discovered. Almost 80 fields existed in the Mid-Continent, in Kansas, Oklahoma, Arkansas, and northern Texas and Louisiana. Foreign investors began moving into the Mid-Continent on such a scale that even Teddy Roosevelt questioned if it had been wise to break up the Rockefeller Trust.

With the outbreak of World War I in August 1914, it became apparent that oil was essential to a war machine. Early battles in Russia, Hungary, Turkey, and the Middle East were fought over oil. More than 50 oil tankers were sunk in the first few months of the war, bringing foreign trade to a standstill, and causing refineries to close. Oil backed up to the wells, and people were out of work, while oil prices dropped. Many companies built pipe lines and storage tanks, and small companies constructed earthen dams. Fires and floods destroyed many of these facilities.

By 1915, Oklahoma began passing many laws to regulate the oil and gas industry, including keeping logs of wells. Almost 700 to 900 wells a month were being completed in Oklahoma. Many of these were recorded in The Oil & Gas Journal, toward the end of each month. Many companies were drilling 100 or more wildcats in many counties outside of northeastern Oklahoma, per month, making it difficult to keep up with each well. These are also listed in The Journal. I have tried to keep up with the initial discoveries, but the reader will have to refer to subsequent articles to get more complete listings of wells. Many of the older fields were drilled before The Journal began noticing the Mid-Continent, but later articles sometimes will digress back to the origin of some of the older fields. After a field was discovered, The Journal writers followed the subsequent development with small articles each week. Volume II was concluded in 1915, with extensive exploration expanding over dozens of counties, and with records beginning to be kept of logs.

Volumes I and II can be used to supplement Oklahoma Geological Survey Bull. 2, 1911, by L.L. Hutchison, "Petroleum and Natural Gas in Oklahoma", 1913, by L.C. Snider, and Oklahoma Geological Survey Bull. 19, 1917, by C.W. Shannon and others. Please consult the index under Publications for more listings of early articles on oil and gas.

Oil and Gas Journal

1902. Vol. 1, No. 1, May 24, 1902. Oil Investors' Journal. The Truth and Nothing But the Truth Concerning the Beaumont Field and other Southwestern Oil Fields. Single Copies 5¢. One Dollar a Year. Semi-monthly. Beaumont, Texas.

Vol. 1, No. 7, Aug. 15, 1902, p. 3. Oil near Denison. The discovery of oil at Weedville, 14 miles south of Denison, Tex., on the Frisco, is reported. It is stated that the well will yield five barrels a day.

1904. Vol. 2, No. 18, Feb. 15, 1904. Now titled "Texas-Louisiana Petroleum Record and Oil Investors' Journal."

Vol. 2, No. 24, May 15, 1904, p. 3-4. History and Description of the Nacogdoches (Tex.) Oil Field. Nearly every essential feature of the oil business in southeast Texas is out of the ordinary, judged by the standards set by the older fields in the Northern and Eastern parts of the United States. In the Corsicana District, in northern Texas, the methods that prevail in the production of oil, and the quantity of production, may be said to be similar in a general way to petroleum operations in the Appalachian fields, where small wells are the rule.

But the Spindletop gushers set a new pace for the oil industry in Texas. Old ideas were knocked into a cocked hat. Instead of five, ten, fifteen, or twenty barrel wells, operators drilled for twenty thousand barrel wells, and they are still drilling for them. When a man starts a wildcat hole in southeast Texas, he hopes for a gusher, and his fondest dream is that he may strike a duplicate of Spindletop. He has no notion of developing a twenty barrel well, or even a fifty barrel well. Undoubtedly a good many wells which would produce this amount of oil have been abandoned in southeast Texas in the last two years. The ordinary Texas operator looks with disfavor on the Matagorda District because the well which recently came in there did not prove an all-oil gusher of capacity ranging up into the tens of thousands of barrels. The well has been doing better than 100 barrels a day - the estimates put it as high as 600 - of oil, but that is not sufficient to cause any excitement among the operators in the Spindletop, Sour Lake, and Batson Fields. They want something tremendous.

It is true that many wells are being pumped for less than 100 barrels a day in the southeast Texas fields, and they are paying, but at the outset, in every field, the operator counted on a gusher when he drilled, and if he did not get it, he probably tried again.

First Development Dates Back to the Sixties. In Nacogdoches County, a little more than 100 miles north of Beaumont, there is an oil field whose development dates back to the sixties, since which time more than forty wells have been drilled in the district. Oil has been found in every well, yet today, to all appearances, the field is idle and all because the production is small, ranging from one to five barrels a day from shallow sands, found at depths varying from 110 to 280 feet.

Nacogdoches, a city of five thousand, is located about fourteen miles north and west of the field that bears the same name. It boasts the reputation of being the first state settlement in the state of Texas, and an old store mart erected in the early part of the seventeenth century, presumably by the French or Spanish, stood on one of its main streets until two years ago, when it was torn down to make way for a business structure. The town and the county have been the scene of many incidents that go to make up the history of Texas and the United States. Gen. Sam Houston had his headquarters at Nacogdoches at one time, and Davy Crockett passed through the town, and made a speech to the people there, while on his way to join the little band of heroes who defended the Alamo.

Center of a Prosperous Country. Today the city of Nacogdoches has two railroads - one, the Houston, East & West Texas, connecting Houston, Texas, and Shreveport, La., and the other, the Texas & New Orleans, connecting

Beaumont, on the main line of the Southern Pacific, with Dallas. It is a thriving town, and is the base of supplies for a large and prosperous farming community. One of its principal dry goods houses carries a \$200,000 stock. Cotton, corn, and other staples are grown in the country, adjacent to Nacogdoches, and there is a wealth of pine timber in the district, which forms the basis of a growing lumber industry.

Texas history seems to have had its beginning in Nacogdoches County, and the same county was the scene of the first attempt to establish a producing and marketing oil business in Texas.

New Orleans Men Were Pioneer Developers. Nineteen years ago, a party of New Orleans men, headed by Edgar H. Farrar, organized the Petroleum Prospecting Company, for the purpose of developing the territory known as the oil springs property, and which constitutes the heart of the proven field at Nacogdoches. About 3,500 acres of land was acquired by the company, and the first well was sunk near what is known as the oil spring. This spring first caused attention to be attracted to the locality as prospective oil-bearing territory. Its waters have a sulphur tinge, and on the surface of the spring the aniline colors that are present when light oil is poured on water are always present.

Their First Well Encouraged Them. A cable tool rig was used to drill the well. Several oil-bearing sands were encountered, and it is related by the older residents of the county that even when the biggest of these was struck, the well gushed oil over the derrick. Evidently the promoters of the company felt that they had found what they wanted, for they immediately started work on additional wells.

Oil Hauled to Nacogdoches in Barrels. Nacogdoches being the nearest distributing point, the oil was hauled there in its crude state in barrels by oxen and mule teams. It cost \$1 a barrel to transport it over the rough, sandy roads, but it is stated that as much as \$5 a barrel was obtained for it for lubricating purposes, this being the use to which it was put.

As the production was increased, it was determined to construct a pipe line connecting the field with the town of Nacogdoches. A three-inch line was laid, and its length is now given as eighteen miles, although it is hard to understand why it should have been longer than the wagon route.

Company Was Sold Out For Debts. Two iron tanks, having a combined capacity of 2,400 barrels, were installed in the field, and another tank of about 1,500 barrels capacity was built at Nacogdoches at the terminus of the line. It is related that the first tests of the pipe line, with oil, required about 5,000 barrels of oil, and that it was some time before the line was put into operation. It seems that water got into the line and that a freeze one cold night caused the pipe to burst in a number of places. The company could not find a satisfactory market for its output, its supply of funds ran short, and the next thing in its career was a sale to satisfy a note for \$3,700. The holder of the note bought the property in and sold it for \$12,500 through G. W. Matthews, a lawyer, and now a resident of Nacogdoches, to A. T. Anderson of Houston, who has since died.

The pipe line was taken up, and part of it was used in the construction of the Nacogdoches water system; the balance was stacked near the oil spring, the site of what came to be known as "Oil City" - the first Oil City in Texas, to be followed by Corsicana, then Beaumont, then Sour Lake, and then Batson.

Acquired by the Houston Oil Company. Mr. Anderson prosecuted additional development work on the property, but did not succeed in placing the business on a commercial basis. He died and his widow sold the property to John H. Kirby for \$60,000. It was taken into the Houston Oil Company at the organization of that concern - which has since gone into the hands of receivers and is said to be a part of that company's holdings at the present time. The Houston Oil Company made no attempt to develop the property beyond the stage which had been reached when it acquired possession.

So much for the history of the oil springs tract.

Shallow Sands Found on East and West Sides. It has been determined by a

score or more of test wells that the property on the east and west sides of the springs land has the same shallow oil sands. In one instance, a well was sunk to a depth of 700 feet on a tract of land less than a mile from the nearest shallow well, to the northwest, but it did not make a producer. Last year the Liberty Petroleum Company, composed of Galveston people, drilled a well to a depth of 1,380 feet on the Kuykendall lease, four and one-half miles southeast of the springs tract. The work was done under the direction of George A. Watkins, who drilled some of the wells on the springs property. He reported that he found the shallow sands, and that he encountered a pay sand at 680 feet, but he cased all these off in the hope of developing a gusher sand at greater depth. This well now stands cased, to a depth of 900 feet.

One well has been drilled on the springs tract to a depth of 1,200 feet. It was put down during development of the land, but it is said that the drill failed to disclose a better sand than those near the surface. It is generally reported at Nacogdoches that no deep wells have been drilled on the springs land, but it appears that at least one test was made by former owners of the property.

Looks Like Sour Lake. In the last two years, Nacogdoches has attracted the attention of the various large producing companies operating at Beaumont, and the representatives of these companies have visited the field. There seems to be no disposition to deny that it is looked upon as a good prospect. Its resemblance to Sour Lake is marked, in many respects. The gravity of the oil from the shallow sands is between 18 and 23 Baume, and it resembles the Sour Lake product. Those who believe in the future of Nacogdoches point to the fact that Sour Lake had shallow wells for years before the deep, or gusher sand, was opened up in 1903. They also point to the fact that deep wells were drilled at Sour Lake for two years or more before the pay sand was located, and that it afterward developed that these wells were on the edge of the productive territory. Nacogdoches, they say, has already been proven to be of greater area than Sour Lake, in the matter of shallow sands, and the fact that one or two deep wells have been drilled on or near the property that is known to have the shallow formations, does not indicate that there is not a deep sand which will prove more productive than the shallow sands. It is contended that it will require not less than six or eight wells to thoroughly test the field for deep sands, and this seems reasonable, inasmuch as the shallow sands have been found within an area that measures more than four miles from east to west.

Railroad Building Through the Field. A railroad is now being constructed from Nacogdoches through the oil country, and with its completion in the near future, the matter of transportation of supplies and of oil, if it is found in large quantities, will be greatly simplified.

With the coming of the railroad, renewed activity is reported in the field. The Gonzales Oil Company, which drilled at Ottine, Texas, last year, will drill a deep well on the west side of the springs tract, near a shallow well put down within the past twelve months by C. A. Jones of Nacogdoches. The usual sands were found in the Jones well.

Deal for Ten Wells on West Side. Another deal, now on, involves the drilling of ten wells on a 100 acre tract west of the springs land, and north of the Jones property. There are now four shallow oil wells on the 100 acre tract, and under the terms of the contract, which has been made on it, ten wells must be drilled within the next eight months. G. D. Francis of Beaumont, who will undertake the new work, expects to make one of the wells a test for the deep sands. It is understood, however, that his idea is to develop the shallow sand and to refine the production at the field. It is understood that a large percentage of cylinder and lubricating oils are obtained from the Nacogdoches crude.

Wells Equipped with Steam Heads. A drive through the field last week revealed wells every few hundred rods, all of them shallow, and containing oil. On the springs property, where the surface resemblance to Sour Lake is so noticeable, are twenty-two wells, seven of them equipped with steam heads and one with a jack. Part of an old standard rig stands over the first well drilled

on the tract. Oil is oozing out of some of the wells, and there are indications of the presence of gas in good quantity. The pump station is boarded up. On the hill east of the spring is the old cooperage house, where barrels were put in condition to receive the oil; and there is another two-story frame building which was once the Oil City Hotel. The one-story frame office of the Petroleum Prospecting Company, and a tank shed, containing two wooden tanks, in which the oil was heated by steam coils before being run into the iron tanks and thence into the pipe line, remain intact. On the ground, scattered over the spring property, are hundreds of barrels, some of them filled with oil. One of the iron tanks is more than half full of oil, and there is plenty of fresh oil on the ground near the wells, to convince the most skeptical that the greasy fluid is there.

Bearing in mind the history of Sour Lake, it will not be surprising if thorough prospecting at Nacogdoches develops a good pay sand at a greater depth than the wells have usually been drilled in this idle old field. The indications are certainly encouraging.

1904. Vol. 3, No. 52, June 1, 1904. The numbering system of the Journal was changed.

1906. Vol. 5, No. 3, July 3, 1906, p. 10. Southern Trend of Indian Territory Development. Indian Territory operators are discussing the probability of oil being found along the 96th meridian line, or the 45 degree trend through the Creek and Chickasaw Nations, and into Texas. As a starter, every test well south of Tulsa is closely watched to verify the southern extension idea.... The 96th meridian line starts with the Bolton Pool in Montgomery County, Kansas, and is clearly marked along the Osage and Cherokee line into the Creek Nation as far as the Glenn Pool. Following the same line into Texas, Corsicana is only 18 miles east of the line, and the small production near Waco is about the same distance west of the line. On the same line, a little gas and a "rainbow" have been found northwest of Denison, just south of Red River, the shallow development at Henrietta, Texas, being considered to the west, while the asphaltic oil produced at Ardmore, in the Chickasaw Nation, 25 miles north of Red River, is only 20 miles west of the celebrated meridian line. On the line, at Roff, Chickasaw Nation, a duster has just been drilled, but two other tests will be started at once. There is much to encourage the followers of lines to the south. - Oil City Derrick.

Vol. 5, No. 5, Aug. 3, 1906, p. 20. Development of Arkansas. The southwestern trend of Illinois development taken in connection with the Indian Territory work, brings the curtain up on Arkansas in the limelight of prospective new territory. Development is apparently converging on that state. Extensive leases have been taken in various portions of Arkansas, but more particularly, however, in the vicinity of Fort Smith, Van Buren, Siloam Springs, and Little Rock. Prospectors are hugging the Indian Territory line, on the way from Kansas. When the Illinois development jumps the Mississippi River, movement will begin from Missouri on the north.

In view of developments at Caddo Parish, La., the southwestern portion of Arkansas is regarded by operators as presenting an outlook of a particularly encouraging nature. The Glenn Pool in Indian Territory shows a southeastern trend. Caddo is almost directly southeast, cutting across the southwestern corner of Arkansas. The oil from the Glenn Pool is of a gravity similar to that encountered at Caddo - 38 to 40 gravity.

Gas produced from seven wells located in Sebastian County was supplied to consumers in Mansfield and Huntington in 1904. On January 1, 1905, consumers in Fort Smith began using gas. Five of these wells were drilled in 1904, the depths of which are as follows: No. 7, gas found at 1,136 feet, depth, 1,530 feet; No. 8, gas found at 1,190 feet, depth, 1,700 feet; No. 9, gas found at 1,320 feet, depth, 1,740 feet; No. 10, gas found as 1,385 feet, depth, 1,385 feet; No. 11, gas found at 1,220 feet, depth, 1,970 feet. In Nos. 8 and 10, gas was found in shale; in Nos. 7, 9, and 11, in sand. The gas is excellent for domestic use, burning without odor. It is free from water and

sulphur, very pure, and a good heater. No oil was found in 1904. It is reported that a well recently drilled at Van Buren encountered gas in sand 120 feet thick at a depth of 640 feet, which is said to be 80 feet nearer the surface than shown in other tests in that vicinity.

Vol. 5, No. 6, Aug. 18, 1906, p. 4. At Caddo. (picture). Savage and Richardson test showing flush pit full of oil. The well gave a perfect gusher display for thirty minutes when water came in presumably from above. The well is 2,267 feet deep.

p. 10. At Caddo. (picture). One of the two burning geysers - a marvelous demonstration of the subterranean forces of nature. One of the most remarkable in the United States. Three hundred yards across. A perpetual boiling, seething, and burning upheaval of gas and water, which rolls and booms like the surf of a stormy sea. (Producers No. 2 blew out May 1905).

p. 12. False Alarm is Turned in on Caddo - Run Made for Nothing. The correspondent at Caddo, La. ... got unduly excited about ten days ago... and brought in a real "gusher". It created quite a flurry in oil circles in the Gulf Coast region, and nearly a dozen representatives of the industry packed their little grips and skidoed to the piney woods and ticks of Northwest Louisiana. ... Narry a drop of oil. The wise ones got off at Shreveport.. The other scouts plunged twenty miles farther north.

Work on the Savage and Richardson test has been going on for about eight months. Near the first of August, at a depth of 2,267 feet, gas pressure became manifest, together with a showing of oil, and after sputtering for a few minutes, the well began to gush, and kept up a perfect display for about thirty minutes, when it settled and began to show some water. It is believed that water came in from above. The four-inch, which was set at 2,204 feet, dropped eight feet, following the drill. It was pulled up and anchored on the six-inch, which is set at 1,600 feet. The ten-inch is set at about 120 feet. Savage and Richardson control forty acres adjoining Caddo townsite. The well was capped on August 12, with a heavy escape of gas. Samples of oil rock taken from the hole at its lowest depth is of exceptionally fine quality.... there is probably twenty feet of the rock which is very porous.

The correspondent's "gusher" is on Pine Island, about two miles east of Caddo, but a distance of about six miles as the wagons go. It is a test started about nine months ago by W. B. Sharp and G. W. Hardy. The hole is 2,204 feet deep. The drillers encountered a gas showing with some oil... and when it began to blow it was surmised that a gusher was trying to get away, and the hole was closed in, and the report got out that Caddo had developed a spouter. The four-inch, which was set at 2,100 feet, was plugged, and a joint of six-inch was screwed to the six-inch over the four-inch. The six-inch is set at about 1,500 feet, and the ten-inch at 350 feet. Only further work on the hole can tell the tale.

The Savage and Richardson test is about two and one-half miles west of the Sharp-Hardy hole, and about a quarter of a mile northwest of the old Savage and Morriscal No. 1. The last named well is one of the most interesting sights in the Caddo District. It was the first well drilled in the Caddo Field. At one time it pumped some oil. At present, the oil is oozing out around the plug in the six-inch, perhaps a half-barrel or a barrel a day. A sample taken from the hole... shows a corrected test of 34.7 gravity. It is said that as much as five or six barrels a day could be bailed out, but as the oil is not adapted for fuel consumption, no use is made of it, except for cleaning machinery, etc. The hole is full of junk, has a bailer and a bunch of four-inch in it, and the casing is parted. (Began June 1904; completed April 3, 1905).

Much interest is manifested in a test by the Atlantic Oil Company, about one and one-half miles southwest of the Savage and Richardson test. This is believed to be away from the heavy gas belt. Many operators contend that prospects are likely to be better by getting some distance from the original development in the Caddo District, which has resulted so disastrously in two instances. The Atlantic Company lost one hole where it is now drilling. The present test is down something close to 1,500 feet, and two or three good oil

showings are said to have been encountered. The company controls 320 acres of land, some of which adjoins the Savage-Richardson 40-acre lease. F. M. Green and R. S. Aldy of Atlanta, Ga., are interested in the concern.

p. 17. At Caddo. Another picture of the burning geyser - a fiery mass of madly tossing waters. Constantly churned by the upheaving gas, weird and fascinating in its awfulness.

p. 8-10. Another Cut in the Price of Mid-Continent Crude Checks Development. 32 gravity...is 45 cents ... a cut of 3 cents. The eight-inch line of the Prairie Oil and Gas Company has been completed to the Glenn Pool, southeast of Tulsa, I. T., and will afford relief to congested conditions in that district.

The prospects of a new pool in the Seminole Nation is an interesting feature of the Mid-Continent situation. The well recently drilled at Wewoka, Seminole Nation, says the Oil City Derrick, has as yet attracted no attention from oil men or prospectors, partly because little was known of the well.... The townsite is on sections 18, 19, and 30, T. 8 N., R. 8 E., the same range that the Cleveland Pool is located in, being 78 miles south and one mile west of Cleveland. The Seminole Nation is 18 miles wide and 32 miles long, one third of the land being allotted to freedmen, the remainder to Indians.....

The first thing that strikes the visitor to Wewoka is the great similarity of topography to Cleveland.... Two years ago, C. L. Long and Jackson Brown, owners of the Wewoka Trading Company, ... let the contract to drill a test hole for oil. The contractor threw up the work when down 700 feet, and the trading company bought the outfit and hired the Bigelow Brothers to do the drilling. A second hole was then started.... There were 5,000 feet of pipe, from a complete string of 13-inch down to 4 and 7/8, a 20-inch hole having been started. The bottom of the hole was 1,600 feet, the last 150 feet without casing. At 1,500 feet, a pocket of gas was struck, which soon blew out, and just before the oil was struck, the regular gas sand showed considerable gas, and it is now showing above the casing. When two feet in the oil sand, the oil flowed freely to the top of the derrick. The formation nearly all the way down was black shale, and fairly good drilling, a fine flow of soft and fine water being struck at 142 feet, and two other water sands were found lower. As soon as the oil struck the shale, it began to cave in, several hours sufficing to fill the hole completely. The oil came up through the cave for a time, and flowed over the casing, which now stands nearly full of solid oil, the pressure being strong enough to keep the casing in constant motion, and the sound of bubbling oil is plainly heard. The oil, as it first flowed from the well, was of the same color and apparent quality as the Cleveland crude, and is produced from the same depth as the Cleveland formation.

A new derrick is to be built, and another test will be drilling soon. The owners of the well have plenty of means, and have never been discouraged, while Manager Bigelow is certain he has opened a good pool. The Bigelows have the contract to furnish Lawton, Okla., a town of 12,000, with natural gas, and have 1,000,000 feet as a starter, furnished by four wells east of the town. They are Pennsylvanians and have been in the business always. At Holdenville, eight miles east of Wewoka, a 1,000-foot hole was dry; at Sacred Heart, 25 miles southwest, the Matson Oil Company abandoned a test at 700 feet in the red beds, and Dr. Kane, of Kane, Pa., who leased 25,000 acres around Shawnee, abandoned two tests for the same reason. The Wewoka test was certainly a 40-barrel well, and would have been a good producer of 32 gravity oil, could it have been cased. By rail, Wewoka is 105 miles southwest of Tulsa.

A likely looking country is around Weleetka, about 25 miles northeast of Wewoka. Weleetka has all the surface indications of an oil field. It is about 45 miles south of the Glenn Pool. A mile north of Wetumka, the first station south of Weleetka, a test well has been drilling for some months, and both oil and gas have been reported several times, the hole now being about 1,700 feet deep. A test has also been started at Weleetka. Henrietta, 12 miles north of Weleetka, and Beggs and Mounds have had test holes drilled,

several of them showing a trace of oil and some gas, with plenty of sand. Around Okmulgee and Morris, a number of tests have found an enormous body of sand, in one or two cases over 200 feet thick. Most of the tests in the southern part of the Creek Nation have been drilled west of the north and south line of production through the Osage and the Glenn Pool.

Vol. 5, No. 7, Sept. 3, 1906, p. 18. The Independent Oil Company of Sherman, Texas, has been incorporated with a capital stock of \$15,000 by J. A. Ballard, R. L. Heflin of Sherman, Edward Woodall of Hillsboro, B. W. Couch of Italy, and A. J. Butler of Fort Worth.

p. 19. The agent for the five civilized tribes of Indian Territory has completed his annual report for the year ending July 30, 1906, showing that in the Cherokee Nation, oil and gas royalties amounted to \$288,231; oil lease bonuses, \$5,403. In the Creek Nation, oil and gas royalties amounted to \$17,490. During the year, oil lease bonuses were paid to individual members of the Cherokee and Creek Nations, amounting to half a million dollars. Since the Interior Department has been receiving oil and gas leases, the total number filed with the Indian Agent at Muskogee is 9,569, of which number 2,065 leases, covering 157,660 acres were approved during the year just closed, and there are now in the agent's office at Muskogee 4,464 oil and gas leases that have not been approved, indicating that most of them have not yet been sent to Washington.

Vol. 5, No. 8, Sept. 18, 1906, p. 7. Madill Petroleum Company of Sherman, capital stock \$10,000. Incorporators: R. L. Heflin, George Chapman, N. B. Birge, W. M. Vinson, and J. A. Holt.

p. 10. Dull Period Encroaching on the Mid-Continent Region. ... A test is going down four miles southwest of Henrietta, in T. 11 N., R. 11 E., nearly fifteen miles southwest of Okmulgee and about 40 miles southwest of the Glenn Pool. These tests are considerably west of the mascot meridian, but in likely-looking territory.

The latest and authentic information from the Madill well shows that at 450 feet, eight feet of sand was found that produces 1,500,000 feet of gas and 3 barrels of a fine amber oil.

Vol. 5, No. 9, Oct. 3, 1906, p. 10. Looking to Oklahoma to Relieve Shortage in Texas Oil. The Prairie Oil and Gas Company began the shipment of Oklahoma crude to the Corsicana Refining Company at Corsicana, Texas, on September 21. Loading racks were erected at Red Fork, a small station on the Frisco, four miles south of Tulsa, and the oil is transported from that point in Union Tank Line cars. The freight rate is 60 cents a barrel.... Corsicana Petroleum Company raised the price from 89 cents to \$1 a barrel, ... equal to the cost of Mid-Continent crude at 39 cents plus the freight rate.

The excess of demand over supply on the Gulf Coast country is causing operators to look around for oil to make up the shortage. The logical plan is to bring Oklahoma oil to Texas. Already a number of Texas operators have been over the lower Oklahoma district, and several have taken leases and are drilling. At Durant and at Madill, twenty miles north of Red River, five-barrel wells have been obtained at a depth of 450 feet. Durant and Madill are thirty miles apart. It seems more than probable that development will show the presence of oil in northern Texas, although there is nothing to indicate that it will be found in the form of gusher pools.

Vol. 5, No. 10, Oct. 18, 1906, p. 1-2. Pipe Line From Indian Territory. The Texas Company will build it, to connect with present terminus of Port Arthur at Humble. Stockholders vote to double the authorized capital, making it \$12,000,000. New issue of stock is financed and company is ready to begin construction. Distance 450 to 500 miles, varying according to route. Conditions in both Territory and Gulf Coast Fields favorable for the construction of the line....eight-inch line ...fifty miles east of Denison and Dallas

18,000 to 25,000 barrels a day, mainly from Tulsa area. The refineries are now paying 62 to 67 cents a barrel at the wells, for heavy crude produced in the region, yielding 3% gasoline and 14% kerosene.... Territory crude will make more than five times as much gasoline and twice as much kerosene.

p. 2-3, Guffey Interests will Buy Territory Oil for Gulf Coast Refinery. What appears to be the first move of the Gulf Coast refineries toward substituting Indian Territory crude for the heavier product of the Southeast Texas Region, which they are now running, is the announcement that the J. M. Guffey Petroleum Company interests, operating the Gulf Refinery at Port Arthur, will begin the shipment of Territory oil by tank car as soon as the necessary facilities can be installed.... Land for a 500,000 barrel tank farm has been procured, along with a gathering system and loading rack. The oil will be shipped from Kiefer Switch, on the Frisco...about 200 miles north of Denison. The distance by rail is said to be 850 miles and the freight rate 75¢ a barrel of 38 gravity oil from the Glenn Pool at 39¢ a barrel ...or \$1.15 a barrel plus extra handling or \$1.25 a barrel at the refinery. About 3,000 to 5,000 barrels a day would be shipped in 15 to 25 tank cars a day.

p. 3. New Orleans Refinery Using Territory Crude. The Record Oil and Refining Company of New Orleans, which has been using from 100 to 150 barrels a day of Henrietta (Clay Co., Texas) crude, has discontinued the use of Texas oil, and is now getting its supply from the Indian Territory. The oil is shipped in tank cars. The distance is more than 800 miles, and the rate about 25 cents a hundred pounds.

p. 8. Savage & Richardson Have an Oil Well at Caddo. Savage and Richardson bailed their well on the Caddo townsite, at Caddo (La.), last week, and the report indicates that they have a show for a 100-barrel well, or better.

Vol. 5, No. 11, Nov. 3, 1906, p. 1-2, 5-7. In the Territory Field. Operators are confident of an outlet to the Gulf Coast. Question of who will provide facilities not so important as question of when they will be provided. An abundance of production, and very little new work under way. Gulf Refining Company's force now in the field. Reported strikes of oil in Louisiana arouse much interest. Observations and personal notes. In the Glenn Field area, 24,000,000 barrels of oil are laying idle in tanks, and the field and surrounding fields have a capacity of 100,000 barrels of oil a day production, mainly directed by the Prairie Oil and Gas Company. The Caddo Field north of Shreveport, and the Napoleonville Field about 60 miles west of New Orleans, have had major discoveries, causing some concern about increased production in Gulf Coast oil. The Gulf Coast refineries handle about 1.5 million barrels a month, but are short almost 1,000,000 barrels a month. Mid-Continent oil has been shipped to Kansas City, Missouri, and to Whiting, Indiana, where Standard Oil Company has been using about 44,000 barrels a day for its refineries, with oil coming from Kansas, and the Osage County-Washington County area mostly. Tank farms are being erected at Ramona, Caney, and Jenks by the Prairie Oil and Gas Company. At Jenks, south of Tulsa, they plan to build about 50 steel tanks, each with a capacity of 35,000 barrels. The Mid-Continent Fields could produce 160,000 to 230,000 barrels a day if there was a proper outlet and market. Only about 27 wells are drilling in the Glenn Pool, and almost none are drilling in Osage County or Washington County. The oil sells at 39¢ a barrel at the tank, if anyone wants it. Tulsa hotels are crowded, looking like the boom days at Beaumont.

Santa Fe's Development at Ardmore. The farthest development to the south is at Madill, a few miles north of the Texas line. A five-barrel well has been completed, and another is drilling two miles south of the first. Corsicana people are working in this district. The oil is reported to be 37 gravity, and there is a lot of gas. Forty-two miles west of Madill and twenty-three miles west of Ardmore, the Santa Fe Railroad has drilled in several wells, one of which is good for forty barrels. The capacity of all the wells completed is put at 150 barrels a day. The depth is about 1,000 feet. The wells are shut in. Gas is plentiful, and the Santa Fe could now supply 20,000,000 feet

from its wells. The oil is 22 gravity, different from any other in the field, and suitable for fuel in its natural state. A deep test is being drilled on the property. The Santa Fe owns a large tract, comprising a good many thousands of acres, on which the development is being prosecuted.

Cost of Wells. Drilling in the Territory costs from 75 to 80 cents a foot, the owner to furnish pipe and rig. Shallow wells are completed for \$2000 to \$3000, while the deep wells in the Osage and Creek come as high as \$5000. Some of the Osage producers are over 2,900 feet deep. All drilling is done with cable tools. The Texas rotary system is not known here.

Notes about Operators. E. R. Kemp, Higgins Oil and Fuel Co. and Jennings Brothers of Beaumont, Texas. J. H. McMorrow, of Houston, now Bartlesville. J. W. Sloan, came from Gulf Coast to Cleveland area in 1903. Matthew Taylor, formerly Gulf Refining Co. at Boston, now in Tulsa area. W. A. Stuart, of Pittsburgh, Pa., operating near Skiatook. M. L. Lockwood, from Pennsylvania, has purchased a home in Tulsa, having organized the Sabine Oil and Marketing Company in 1901 at Beaumont, Texas. R. A. Josey, of Beacon Oil Co., came from Beaumont, Texas to Tulsa and Cleveland area in 1903. E. A. Rider, with Guffey & Galey of Beaumont, now with Kansas Natural Gas Co., is living at Kansas City, working in the Tulsa area since 1903. Robert Galbreath, whose discovery well was in the Spring of 1905 of the Glenn Pool, holds more land than any other operator in the pool. W. H. Roeser, of Tulsa, was with Texas Petroleum Co. at Beaumont.

p. 12.

Holland S. Reavis, Editor.

Great Oil Field and a Greater Oil Industry for Texas. In its present development, the Mid-Continent Oil Field extends nearly 400 miles from north to south. A small well has been brought in a few miles north of Red River, and leases have been taken southward almost to Corsicana. From east to west, the field is nearly 150 miles wide. No one believes that it has been fully defined in any direction. There is reason for the opinion, often expressed, that there is oil all the way from Kansas City to the Gulf.

p. 12. Captain Arnold Resigns. Captain H. Y. Arnold, manager of the Gulf Refining Company at Port Arthur for five years, has resigned, and is now in charge of the Gulf Company's interests in Indian Territory, with headquarters at Tulsa.

p. 12. Hitchcock's Approval Asked for Pipe Line Privilege. Secretary Hitchcock of the Interior Department, according to press dispatches, has announced that the J. M. Guffey Petroleum Company have made application for a right of way for a pipe line from Indian Territory to the Gulf of Mexico.

Vol. 5, No. 12, Nov. 18, 1906, p. 1-3. Two Lines From Indian Territory. Mellon interests of Pittsburgh to build an eight-inch line to Gulf. The Texas Company has ordered pipe for a like project. Mellon survey crews at work, and Texas Company crews will soon be in the field. Material for gathering system in Glenn District for Mellons now on ground. Situation in Territory portrayed in special correspondence by Holland S. Reavis. Robert Galbreath drilled the first well in the Glenn Pool November 22, 1905, on the Ida E. Glenn Farm, SE-1/4 Sec. 10, T. 17 N., R. 12 E. (completing in the Glenn or Bartlesville sand, as mentioned later in article on Apr. 19, 1907). Production is at 27,000 barrels a day now in the Glenn Pool.

New Tests East and South of Madill. Tests now being drilled, or soon to be started, in the Chickasaw Nation, just north of the Red River and the Texas line, may develop a connecting link between the rich territory in the Tulsa District and the Corsicana and Powell Fields in Navarro County, Texas. On the Arbuckle Farm, east of Madill, 106 miles south of Tulsa and 28 miles north of Denison, Texas, the Fall River Company's No. 1 went through five feet of light pay sand at 450 feet. The well, although shallow, developed a strong flow of gas. The oil is 42 gravity, or better, and appears to be like the Muskogee product, only of a darker color. A second well is being drilled on the Arbuckle Farm by the same people, and at last accounts was hung up at 700 feet. Wither-

spoon and others are drilling a test on a 30-acre tract, a mile and a quarter east of the Arbuckle tests. At the cotton gin in the town of Madill, the owners, Sherman people, are drilling a test for oil or gas. The first test on the Archerd Farm, about two miles south of Madill, was dry at 730 feet, and has been abandoned. East of Kingston, eight mile south of Madill, a test is being drilled, and a contract has been let to drill a 2,000-foot hole at Durant, twenty-five miles east of Madill. Skelton and others of Okmulgee are interested in this proposition. Money has been raised to sink a test at Bennington, fifteen miles east of Durant, and the contract is to be let this week. This location will be on the 96th meridian. The oil development stays pretty close to the 96th meridian line all the way down. Witherspoon and Carmody of Corsicana and J. A. Tomlinson of Tulsa have about 5,000 acres leased in the territory east of Madill. Mr. Tomlinson also has leases on 25,000 acres in Fannin County, Texas, south of Madill and north and a little east of the town of Bonham. Operators are confident that there will be a southern extension of the Territory Field. A new test is started at Mannsville, twelve miles northwest of Madill, by local people.

To Test Muskogee Territory. Information has been received here to the effect that the interests represented in the Muskogee Oil Refining Company have acquired leases surrounding the city of Muskogee, and that arrangements will be made within the next few days for the drilling of at least ten wells to test the territory on all sides of the small pool which created so much excitement at Muskogee early in 1904. The oil development at Muskogee is confined to about 25 acres. Forty or more wells were drilled during the rush, and about \$160,000 was put into the proposition - very little of which was taken out by the great majority of investors. At one time the output was 600 barrels a day. Now it is a 1,000 barrels a month.....The total output of the pool to date has been about 160,000 barrels. One concern - the Muskogee Oil Refining Company - buys the entire production, paying 90 cents a barrel for it...The pay sand is found at a depth of 1,050 feet, and the oil is better than 41 gravity, light in color, and of a genuine paraffine base. ... This is the only refinery in the Territory. It was built in 1904. Frank Timmis, president, and C. T. Madison, manager, from Beaumont and Corsicana, Texas; Alexander Hamilton, superintendent, formerly with the Texas Company at Port Arthur, Texas. It refines about 9,000 barrels a day, from tank cars from Turley, north of Tulsa, and from Cleveland, Oklahoma. It sells final products to Southwestern Oil Co. of Houston, Texas, and to Record Oil and Refining Co., of New Orleans, La. It has tank stations at Guthrie, Fort Smith, Little Rock, South McAlester, Vinita, Ardmore, Okmulgee, and Muskogee, and has shipped products to Cleveland, Ohio.

p. 3. Personal Notes. William Kennedy, geologist for the Southern Pacific, arrived in Tulsa today and is staying at the Robinson. He will be here until the end of the week. T. J. Wood, of Corsicana and Houston, was here last week, with Bouncer Oil Company, composed of himself, R. E. Brooks, and J. E. Whiteselle.

p. 19-20. Production of Natural Gas in 1905. Oklahoma and Indian Territory showed an increase of 161 percent over the production of 1904. .. In Kansas, Oklahoma, and Indian Territory, large and prolific gas fields are being opened up within the oil-bearing formations of that region. Oklahoma and Indian Territory drilled 80 wells, of which 36 percent were dry.

Vol. 5, No. 13, Dec. 3, 1906, p. 1-2, 14-15. Tulsa Now The Oil Center. Territory-to-the-Gulf pipe line projects and the Glenn development, have put it on the map to stay. Great activity in construction work. Gulf coast interests completing preliminaries. November report on Mid-Continent field operations. Attacking Hitchcock's lease restrictions. Prairie Company's runs. Miscellaneous Notes. J. M. Guffey Petroleum Co. and Gulf Refining Company reorganize to construct a common line, and The Texas Company will have its own line to the Gulf Coast. The Gulf line will run from Tulsa, to 10 miles east of Tishomingo, crossing the Red River north of Denison, Texas, southeast to Nacogdoches, to Sour Lake District west of Beaumont, Texas. The Texas Co. line will go from

Tulsa to Dallas to the Corsicana-Powell District, Texas. Meanwhile, Gulf will ship 4,000 to 5,000 barrels a day by tank car from Kiefer to Port Arthur, at a freight rate of 25¢ a hundred pounds or 78 cents a barrel, which will require 250 to 400 tank cars. Superior Consolidated Oil Company, under F. C. Henderson, is scheduled for its first shipment of crude from the Alluwe District, of 5000 barrels a month to the Muskogee refinery and 5,000 barrels a month to Record Oil and Refining Co. of New Orleans, La., this week. Henry Raymond, of Raymond, Pynchon & Co., bankers of 111 Broadway, New York City, is a partner of Mr. Henderson, and C. H. Hammet was a partner but was bought out. Henderson and Hammet previously operated at Beaumont, Texas. John Markham, of Bartlesville, was also from Beaumont, and he has become wealthy from leases near Bartlesville.

Personal Notes. George L. Craig, former manager of J. M. Guffey Petroleum Co., was in Tulsa last week. He formerly represented interests in leases on 520,000 acres of the Osage Nation, and has extensive leases in Illinois.

W. E. Griffiths of the land department of Guffey Company in 1901 and 1902, was in Tulsa to handle leases for the Mellon interests, with the Gulf pipe line.

James R. Sharp came up from Duncan on November 21. He is drilling a test well at Duncan, on Wild Horse Creek, 32 miles west of the Santa Fe company's development near Wheeler, which is 22 miles west of Ardmore. At last accounts, the hole was 1,200 feet deep. A sand similar to that found in the Santa Fe's deep test at Wheeler at a depth of 970 feet was penetrated at Duncan at 900 feet. The Santa Fe well is between 1,100 and 1,200 feet deep. A diamond drill is being used at Duncan.

H. L. Wood, western correspondent for the Oil City Derrick, visited Caddo, Beaumont, Port Arthur, and Humble during the early part of the month, sending in some interesting letters to his paper from these points. Mr. Wood lived in Texas before there was any oil industry in the state. He is the dean of the oil dope disseminators in the mid-continent region.

Vol. 5, No. 14, Dec. 18, 1906, p. 1-3. News from The Territory. Reported that J. C. McDowell will quit the Kansas Natural Gas Company January 1 and ally himself with Gulf Pipe Line Company. W. L. Mellon and general manager C. H. Markham at Tulsa. The Texas Company buys land for tank farm and station two miles south of Tulsa, its engineers on the ground to make preliminary surveys. Southern Pacific's deal for fuel oil supply. Prairie Oil and Gas Company to lay new line from shallow sand district. Runs being increased. Personal and miscellaneous notes.

False Alarm at Wewoka. A false alarm was rung in on the Tulsa crowd early in the present week, when a report was circulated to the effect that a big well had been brought in at Wewoka, capital of the Seminole Nation, 130 miles south and west of Tulsa... The drillers were setting the ten-inch at 900 feet - nothing more... The present well is the fourth that has been drilled on the townsite, about one-half mile from the main business street. The first test was abandoned at 560 feet. The second was a bum hole at 1,200 feet. The third made a flow at 1,720 feet through a 4 and 7/8 inch pipe, but caved in. It is now being pumped with a jack, and is yielding less than two barrels a day. The Wewokans hope to get into the sand right, in their fourth well.

Notes. J. P. Straughan, formerly superintendent for the Evangeline Oil Company, came in this week. He started south Friday, and intends to go over the country between here and the Red River, and will probably be located here this winter.

Oswald S. Parker, of Beaumont, was in Tulsa this week. He will inspect the Madill development, and that west of Ardmore, before returning to Beaumont.

p. 15. New Charters and Incorporations. The Gulf Oil Company, at Muskogee, to refine oil, etc. W. R. Allen, A. O. Wise, P. B. Macoughtry, E. E. Million, and B. E. Thomas. Capital \$125,000.

Scott Oil Company, at Tulsa, with \$40,000 capital stock, by E. L. Maclary, J. S. Moffitt of Tulsa, and E. J. Nelson of Pawhuska, I. T.

Elizabeth Oil Company of Tulsa and Pawhuska, I.T., with \$40,000 capital stock, by W. R. Ritchie, T. A. Hagler of Tulsa, and E. J. Nelson of Pawhuska.

Ardmore Gas Company, Ardmore, with \$500,000 capital stock. Surveys are now being made for the construction of pipe line between Ardmore and the Wheeler Oil Fields, a distance of 20 miles. J. S. Connelly of Carthage, Mo., is engineer in charge. C. F. Meade of Kansas City, Mo., is president; W. A. Ledbetter, secretary, and P. C. Dings, treasurer, both of Ardmore.

Carnegie Oil & Gas Company, Carnegie, O. T., with \$25,000 capital stock. Dan W. Perry, Alexander Moore, Clyde C. Leech, M. G. McCall, and J. P. Albertson.

1907. Vol. 5, No. 15, Jan. 3, 1907, p. 1-2. Nearly 7 Million Barrels. That much steel storage in sight for the Glenn Field. Officials of the companies that are to lay lines to the Gulf will be in Tulsa this week. The Texas Company buys land for station near Dallas. Runs of oil show increase in December. Barnsdall's sulphur deal in Louisiana. Estimates of Glenn Pool production. "Jack" Crosbie gets in the game.

Chasing the Wildcats. The owner of several valuable leases in the Glenn Field came back last Saturday from an inspection of various tests drilling south of Tulsa. He found one just starting at Morris, eight miles east of Okmulgee, on the Frisco. A previous test was drilled to 1,100 feet, and had a showing of oil, also considerable gas at 600 feet. It is claimed that the well will make 3,000,000 feet of gas. Three gas wells have been completed at Morris, and the product is being consumed in the town. A line is also being laid to Okmulgee to supply that city. A test for oil is drilling at Dustin, twenty-five miles south of Okmulgee, with no developments worthy of mention. Another test is drilling at Hoffman, eight miles south of Morris. At Beggs, the first station south of Mounds, on the Frisco, a dry hole was abandoned at 1,700 feet, after it had been shot, with no result. A test is down 1,300 feet at a point three miles northwest of Beggs, another four miles south and a little west of Mounds, and another eight miles south and west of Mounds. At Porum, thirty miles south of Muskogee on the Midland Valley Railroad, a test has been completed without results.

Major Ernst in Tulsa. Major H. M. Ernst of Olean, N. Y., who was a pioneer in the Corsicana, Texas, Field, and later an active spirit in the Houston Oil Company and a director of the Higgins Oil & Fuel Company of Beaumont, was in Tulsa last week. Major Ernest is a veteran in the oil business, and has been through all the big "excitements"...In a reminiscent mood among friends in the corridor of the Robinson Hotel last Friday, Major Ernst told of Captain Lucas' efforts to interest him in Spindletop the year before the gusher was struck in that field. "Lucas wrote me a number of letters at Corsicana, telling me of the indications at Spindletop, and of his desire to test the territory. He had a lot of leases and wanted enough money to drill a well. I did not encourage him....I advised Lucas to lease up a big batch of land and take the leases to Jim Guffey of Pennsylvania, and get Guffey to carry him for an interest. He did that very thing, and we all know the outcome."

Personal Notes. J. L. Henry, the original Humble exploiter, and one of the fastest right-of-way men in the business, was in Tulsa on December 30.

Holland S. Reavis.

Vol. 5, No. 16, Jan. 18, 1907, Name changed back to Oil Investor's Journal.

p. 10. The Arkansas & Territorial Oil & Gas Company is said to be constructing a pipe line from its field south of Fort Smith to Fort Smith, Arkansas, and when it is completed a line is said to be slated for Little Rock.

p. 11. Mid Continent Field Operations in 1906. (from Oil City Derrick). Oklahoma and Indian Territory are credited with 2,779 completions in 1906, 2,266 producers and 513 dry or gassers. An average of 146 wells were drilling, and thirty rigs up at the close of each month was the record for the year.

p. 11. New Incorporations. Santa Fe Oil Company of Tulsa, I. T.; capital stock \$40,000. Incorporators, F. B. Buford and Vena Clay of Tulsa; J. B. Skinner, of Pawnee, O. T.

Aline Oil, Gas & Coal Company, of Aline, O. T.; capital stock \$500,000. Incorporators: E. R. Clark, E. T. Hollingsworth, J. F. Rush.

Aline Oil & Gas Company of Aline, O. T.; capital stock \$500,000.
Incorporators: J. A. Hartshorn, J. M. Sears, J. F. Rush, and others.

Continental Petroleum Company of Cleveland, O. T., and Tulsa, I. T., has been incorporated with \$10,000 capital stock, by J. W. Sloan of Cleveland, J. H. Barry, and W. S. McCluskey of Tulsa, I. T.

p. 20. New Incorporations. Oklahoma Territory. New State Gas & Oil Company of Gotebo is developing a gas field near Gotebo; will let contract for the construction of a pipe line from the field to Hobart, a distance of seventeen miles.

Graves Oil Company of Pawhuska has been incorporated with \$40,000 capital stock by C. S. McDonald of Pawhuska, Arthur F. Hendren and J. L. Seils of Tulsa, I. T.

Arkansas, Stringtown Development Company of Stringtown has been incorporated with \$5,000 capital stock by G. W. Rouse, W. D. Wasson, George A. Smith, L. N. Dodgen, E. C. King, O. W. Patterson, and others, to drill for gas and oil wells.

Vol. 5, No. 17, Feb. 3, 1907. p. 1-4. Laying Pipe for Territory Lines. The Texas Company starts its 8-inch line south to Red River, and the Gulf Pipe Line Company begins movement northward from Sour Lake on Gulf Coast. Gulf Company moving oil from Glenn Pool and making car shipments to Port Arthur. Prairie Company (Standard) removes connections from properties that are connected with the Gulf line. Field operations and personal notes.

Santa Fe's Operations at Wheeler. The Santa Fe deep test one and one-half miles northwest of Wheeler, I. T., and twenty miles from Ardmore, failed to develop anything below the 1,000-foot sand. A depth of about 2,000 feet was attained. The well was finally completed in the 1,000-foot sand, and is good for 50 barrels of 22-gravity oil. It also shows a capacity of 8,000,000 feet of gas. J. R. Sharp is still drilling at Duncan, west of Wheeler, without result.

Reports from Bennington. Rumors of a strike at Bennington, in the Choctaw Nation, seven miles north of Red River, twenty-one miles east of Durant, and forty-six miles east of Madill, have been percolating through the woods to Tulsa for several weeks past. Bennington people have a half interest in the test, and the other half is held by Bartlesville operators, among them W. H. Johnson. The most recent information from the well is to the effect that the drill penetrated an oil sand at depth between 600 and 700 feet, and passed through forty feet of this formation. One report has it that the sand was found at 620, another makes it 680. Whatever it was, it was cased off, and the contractor will complete his contract to 1,000 feet. If he finds nothing deeper down, the pipe will be pulled and the well will be shot. No test of the sand was made, according to report.

Theodore Roosevelt, Jr., was in Tulsa for a few hours on January 26. He bought an 80-acre lease in section 11, T. 17 N., R. 11 E., for which he paid \$400. The property is about two miles west of the Glenn development and three miles south of Sapulpa. Young Roosevelt is touring the west and will return to his studies at Harvard in February.

A report has reached here of the completion of a new gas well near Fort Smith, Ark., which is larger than those previously drilled. Heretofore, the gas wells in that section have been small, running from 1,000,000 to 2,000,000 feet. The new one is said to be good for from 6,000,000 to 10,000,000 feet.

The wildcat well which L. B. Elyea and others are drilling at Stroud, Okla., fifty-two miles southwest of Tulsa, is under-reaming at 2,400 feet.

At Dustin, the test which Charles Dow is drilling was down 1,310 feet on January 27, with a fishing job.

p. 18. New Incorporations. Territories. Wolverine Oil Company of Bartlesville, I.T.; capital stock, \$100,000; by J. A. Rowland, president; Vaska McFadden, vice president, and Ethel Kehler, secretary-treasurer.

Garfield County Oil & Gas Company of Enid, O.T.; capital stock, \$100,000; by Buell T. Thompson, Adolph Rosedale, and John C. Moore.

Medford Oil & Gas Company of Medford, O. T.; capital stock, \$250,000; by W. D. Koch, H. D. Reed, J. L. Godfrey, D. E. Stetzler, E. M. Moss and others.

Sanders Oil & Gas Company of Muskogee, I. T.; capital stock, \$20,000; by Howard Needles, president; F. L. Sawyer, vice-president; G. W. Walton, secretary, and Mattie Ault, treasurer.

p. 21. Government Incorporation of Oil Lands in Territory. The creation of a corporation to take charge of the operation of mineral and oil lands of the Choctaw and Chickasaw Nations, in Indian Territory, with the President of the United States as ex officio head, is the object of a bill introduced February 2 by Senator Clapp. This is in line with suggestions made by Indian Commissioner Leupp in his annual report, and the plan has been approved unofficially by Secretary Hitchcock.

It is proposed that the association shall be known as the Choctaw-Chickasaw Oil and Asphalt Company, and that it shall take title to and manage and dispose of coal, oil, and asphalt lands and deposits in the Choctaw and Chickasaw Nations, for the use of the persons whose names appear on the citizenship rolls of these Indian tribes. . . . The bill provides that the corporation shall have authority to explore for minerals, sell and transport coal and asphalt, both crude and refined, to prospect for, extract, refine, and transport oil, and lease land for the mining of coal and asphalt, and the extraction of oil. . . . It is provided that the organization shall not continue more than twenty-five years, and that the capital and segregated lands shall not be subject to taxation.

p. 23. Territory Oil Arrives. The first consignment of Territory crude, consisting of seven cars, loaded by the Gulf Pipe Line Company at Kiefer, I. T., and consigned to the Gulf Refining Company at Port Arthur, Texas, arrived at Lucas Station on the morning of the fourth day after leaving the Territory.

Vol. 5, No. 18, Feb. 18, 1907, p. 1-4. Territory Developments. Progress of pipe laying on the two new lines from the Glenn Pool to the Gulf Coast. Summary of the route to be followed. Location of stations. Surplus of production in Mid-Continent Field now confined to Creek Nation and Cherokee shallow sand. Advance in price, and reason therefor. R. A. Josey gets \$115,000 in cash for his interest in two properties. February completions in Glenn development. Personal notes and comment. The Texas Company on February 4 began laying 8-inch pipe, from the tank farm on the Clinton place 2 miles south of Tulsa. Today they are five miles on the way. The survey parallels the ninety-sixth meridian for 100 miles, passing west of Okmulgee and Henrietta, I. T., and then veering slightly to the west between Atoka and Coalgate. The line will cross Red River at a point east of the M. K. & T. bridge. It will traverse Grayson County west of Sherman, also Collin, Denton, and Dallas Counties. From Dallas, its direction will be a little to the east, through Ellis, Navarro, Limestone, Leon, Madison, Walker, and Montgomery Counties to a junction with the present lines at Humble in Harris County.

On the same day, the Gulf Pipe Line Company began laying 8-inch pipe from its south end at Sour Lake, 22 miles west of Beaumont. The line will come to the Red River just west of the St. Louis and San Francisco bridge at Arthur. It will run parallel to the ninety-sixth meridian when it first leaves the Glenn Pool. North of Okmulgee it will swing to the east and pass a few miles west of South McAlester, Antlers, and Hugo. It will come into Texas in Lamar County, passing between Paris and Reno, and will traverse Delta, Hopkins, Franklin, Wood, Smith, Rusk, Nacogdoches, Angelina, Tyler, and Hardin Counties, joining at Sour Lake.

T. H. Bass, better known as "Tumps", who made a stake at Batson and another at Jennings, spent a week in Tulsa recently. He may return and get into the game here. Bass is now operating at Jennings and Spindletop. Captain Arnold went over to Claremore, a near-by health resort, to test the merits of the mineral waters there.

The Tulsa World will issue a special edition devoted to the Glenn Pool oil development on Sunday, February 17. Some excellent pictures and a history of the field will be the special features.

Holland S. Reavis

p. 10. Advertisement. Richardson-Gay Oil Co., refiner of illuminating and lubricating oils, made from the celebrated Corsicana light crude. Manufacturers of all kinds of greases. Refinery and factory, Corsicana, Texas.

p. 11. New Incorporations. Territories. Russell Oil Co. of Oklahoma City, O. T., has been incorporated with \$40,000 capital stock by Clarence O. Russell, Cecil C. Russell, and Ruby Russell.

Phillips Oil Company of Pawnee and Alluwe, I. T., has been incorporated with \$40,000 capital stock by G. H. Phillips, C. I. Pumroy of Pawnee, W. F. McAdams of Nowata, I. T.; G. A. Byington and E. Phillips of Yates Center, Kans.

Southern Asphalt Company of Ardah (not a post office), I. T., recently reported incorporated with \$500,000 capital stock; holds a 99-year lease on 350 acres of ground containing a large supply of asphalt. A refinery with a capacity of ten tons of refined product daily is also on the property. C. W. Young, formerly of New Albany, Miss., is president and general manager, and E. M. Coker, Memphis, Tenn., secretary-treasurer; main office, 68 Randolph Building, Memphis, Tenn.

Ozark Coal & Railway Company of Oklahoma City, O. T., has amended charter, increasing capital stock from \$50,000 to \$400,000 and reviving its original plan of controlling and developing coal, zinc, lead, and other mineral fields in Oklahoma, with a system of railroads connecting them, and providing outlets for the products of the mines. J. H. Durkee of Kansas City, Mo., has been elected president, and J. J. Johnson of Oklahoma City, secretary; main offices, Oklahoma City and Kansas City, Mo.

Others. A company at Eureka Springs, Ark., is being organized, with \$10,000 capital stock, by George Blair and A. N. Mathews, to drill for oil.

Van Buren, Ark. - E. G. Kerr, mentioned January 31 as having secured franchise for furnishing the city with natural gas, has transferred franchise to the Arkansas & Territorial Oil Company of Chicago, now operating in Sebastian County, Ark., and it is understood that they will begin drilling in Crawford County at an early date.

p. 12. Oil Investor's Journal has an alternative Mid-Continent office in room 413, First National Bank Building, Tulsa, Oklahoma.

Mid-Continent: A New Publication. The first number of Mid-Continent, a monthly magazine published at Kansas City and devoted to the great southwest, with its vast oil, gas, mining, and agricultural resources, appeared last month, and is a most creditable publication. S. N. Francis is the general manager, with headquarters at Tulsa, I. T.

Natural Gas Journal. The Natural Gas Journal, devoted to the gas interests of the country, is the name of a new publication that has just made its appearance. J. Alex Mayers, a gas engineer and contractor of New York City, is managing editor, with offices at 56 Pine Street. The new journal is issued monthly.

Vol. 5, No. 19, March 5, 1907, p. 1-3. Glenn Oil for Security. Big refinery at Beaumont will get a supply of light crude by rail from the Territory. Special rate of 46-1/2 cents a barrel obtained over the Midland Valley and Kansas City Southern. Frisco to install fuel oil on passenger engines out of Kansas City. Work started on the Territory end of the Gulf Company's main pipe line. Record of runs and shipments for February. News notes and personal comment.

"Press" Lea of Corsicana arrived in Tulsa this week. The Tulsa contingent is being added to every day. "Press" will do some contracting in the Glenn Field, and he also expects to get hold of some good stuff. He came by Madill, and reports two rigs at work in town, and two near the location of the first test which developed oil and gas. The wells in town are dry, but the prospects where the others are drilling he considers excellent.

Holland S. Reavis

p. 14. The Journal's Tulsa Office. The Oil Investor's Journal has established an office in the Turner Building, opposite the Robinson Hotel, at Tulsa, I. T., which is intended to be as much for the use of its friends as for its own purposes. Maps of the Indian Territory oil fields, and all of the

newspapers and periodicals which contain matters of interest to the oil trade will be kept on file in this office for the convenience of visitors.

p. 16. Deliveries through Panama pipe line to begin in April. Initial deliveries of California crude by the Union Oil Company, through its 8-inch pipe line across the Isthmus of Panama, are expected to begin about the middle of April. One cargo of approximately 20,000 barrels has already arrived at Panama, the Pacific terminus, and a second cargo of the same amount is about ready to sail from San Francisco. The line is in complete readiness to handle oil. It is 51 miles long, requiring approximately 20,000 barrels of crude oil to fill it. There are no intermediate stations. The present operating force consists of fifteen men. A gang of 527 men laid the line under conditions that required exceptional engineering ability. Deep and slimy swamps, together with almost impenetrable tropical forests, were among the difficulties encountered. In one instance, it required fifty tram cars of rock to make a foundation for a single telegraph pole. Seven breaks and one leaky joint developed when the line was tested.

p. 17. Holding Company for Mellon interests incorporated. The Gulf Oil Corporation, with a capital stock of \$15,000,000, divided into shares of the par value of \$100 each, and with an authorized issue of \$15,000,000 of first mortgage bonds, has been incorporated under the laws of New Jersey, to serve as a holding company for the stocks and bonds of the J. M. Guffey Petroleum Company and the Gulf Refining Company, representative of the Mellon interests of Pittsburgh, in Texas and Indian Territory. The officers are: A. W. Mellon, president; W. L. Mellon, vice-president; R. B. Mellon, treasurer; C. F. Farren, secretary and assistant treasurer; L. S. Haskell, assistant secretary. The principal offices are in the Frick Building Annex, Pittsburgh, Pa.

p. 19. New Incorporations. Territories. Hurd Oil & Gas Company of Muskogee, I. T. Capital stock, \$500,000; by J. R. Dudding, C. L. Hurd; D. H. Hiddleton; T. R. Stewart, T. H. Martin; A. C. Trumbo; A. C. Imus, E. A. Clark; R. L. Shoemaker; and William Wainwright.

Arnet Oil & Gas Company of Muskogee, I. T. Capital stock, \$50,000; by C. W. Gormley, W. F. Hurt, and M. Huckleberry.

Breckenridge Oil & Gas Company, of Porum, I. T. Capital stock, \$40,000, by M. C. Jordan, W. P. Nonweller, and R. A. Clark.

Superior Development Company, of Porum, I. T. Capital stock, \$50,000, by M. C. Griffith, Charles J. O'Keefe, Charles Moller, and George Pheasant.

Willard Oil Company of Vinita, I. T. Capital stock, \$10,000, divided into 400 shares of \$25 each, by A. F. Ault, W. E. Ross, J. C. Starr, and Guy Patten.

Royal Oil Company of Pawhuska, O. T. Capital stock, \$40,000 by J. T. Baker, George E. Tucker of Pawhuska, and W. L. Reman of Tulsa, I. T.

Scipio Oil Company of Pawnee, O. T. Capital stock, \$40,000, by C. H. Stewart of Pawnee, C. C. Cole, and J. R. Cole, Jr. of Tulsa, I. T.

Walters Oil & Gas Company of Walters, O. T. Capital stock, \$100,000, by John S. Russ, S. H. Blair, George H. Keim, H. F. Tripp, and Robert Sherman.

Vol. 5, No. 20, March 19, 1907, p. 1-3. Mid-Continent Letter. Forty-one gravity oil developed at 760 feet in the Henrietta, Clay County, District, close to Red River. Much activity in lands and leases. Gulf Pipe Line Company increasing its runs from Glenn Pool. Progress of Territory-Gulf pipe line construction. February field operations. Notes and personals.

Henrietta, Clay County, Texas, March 12. A deep sand that yields oil testing 41 degrees has been developed by the Clayco Oil & Pipe Line Company, in a well drilled on Lot 25 in the Henrietta or Clay County Oil Field, Fourteen miles north of Henrietta, and six miles south of Red River. The well was completed about the first of the month. It has been pumping seven days, and is now producing at the rate of five barrels an hour or 120 barrels a day. There has been no light oil developed in Texas since the discovery of the Corsicana

Pool eleven years ago. The hole is 760 feet deep, drilled eighteen feet into the pay.

For six years past, this district has been producing a fair grade of light oil from a depth of 275 feet. The shallow wells now being operated number something over a hundred, and their combined daily output is between 200 and 300 barrels. Occasionally one has been brought in which would start off at 20 barrels a day. They average about 33 gravity, and bring 95 cents a barrel at the well, and Clayco buys it, bringing the oil one and one half miles north to the Wichita Valley Railroad. They sell the oil to refineries in Texas and Louisiana-among them the Corsicana Refining Company at Corsicana, the United Oil & Refining Company at Beaumont, and the Record Oil and Refining Company at New Orleans. The freight rate is 31-32 cents a barrels from Petrolia, the name of the station north of the field.

The well which has developed the deep sand was started on November 30 of last year. It is located about midway between the north and the south limits of the shallow development, which extends over an area three and one-half miles from north to south, and about one mile from east to west....H. P. Nichols, manager of the Clayco Company, was in charge of the well. A combination rotary and cable rig was used.

With the exception of the development on the Byers Brothers Land, marking the northwest boundary of the shallow sand, the production in the Clay County Field is confined to what is known as the Parker County School Land, laid out in lots of 160 acres. Some has been subdivided into 5-acre tracts, which are now offered at \$400 and \$500 an acre....The oil contains more paraffine than any crude yet discovered in Texas.

Clay County is directly south of Comanche County, Oklahoma, 100 miles west of Madill, west of the 98th meridian. Approximately 10,000 acres in leases across the Red River, in Comanche County, have been secured by J. M. Guffey and T. N. Barnsdall of Pittsburgh. Two men are still in the county getting hold of all the land possible.... Petrolia is a thriving community....Byers Brothers own 35,000 acres between the Henrietta Field and the Red River.... Operators are speculating upon the probable action of two companies that could lay lateral lines ...The Texas Company survey line from Glenn Pool will cross the Red River near Denison, 100 miles to the east, and the Gulf line will cross the river at Arthur, 140 miles east.

Development at Gotebo. James O'Neil Bruen of Chanute came in today from Gotebo, Kiowa County, Okla. Seventeen or eighteen wells have been drilled in the district near Gotebo, and oil testing 37 gravity has been developed at 385 feet. One well is now flowing about 20 barrels, and two others are pumping 16 barrels. Gotebo is 9 miles east and a little south of Hobart. Twenty-five miles west of Hobart at Granite, local people in conjunction with Chicago interests, are sinking a test well which has been drilling two years. It is stated that the hole has cost, to date, \$45,000. It is 2,200 feet deep, and the pay sand has so far eluded the drillers. Mr. Bruen says the Gotebo well is a 15-barrel producer. He inclines to the opinion that the sand found at Henrietta is the same as the 385-foot sand at Gotebo.

Holland S. Reavis

p. 19. New Incorporations. Territories. Salina Oil Company of Pawnee and Tulsa, I. T. Capital stock, \$40,000, by Frank Shoemaker of Pawnee, John G. Miller and J. W. Woodford of Tulsa.

Weatherford Oil & Gas Company of Weatherford, O. T. Capital stock, \$250,000 by J. J. Williams, C. F. Boyer, G. Stettler, M. C. Barnett and others.

Miscellaneous. Fuel Oil & Gas Company of Fort Smith, Ark. Capital stock, \$25,000, by W. W. Johnson, Sam H. Milliken, George A. O'Hara, A. M. Carter, and A. E. Northrop.

Vol. 5, No. 21, April 5, 1907, p. 7-12. Deep Pay at Muskogee. Creek Oil & Gas Company finds a pay sand at 1,740 feet, three miles southwest of Muskogee. Operators from all over Kansas and the Territories rush to scene of the new strike. Many believe a large pool will be developed. All the big companies

have representatives on the ground. Progress of construction on the Territory-Gulf pipe lines. Development work in the Glenn Pool. Runs and deliveries. Notes and personals.

Test wells in the Territory. At Madill, Claude Witherspoon and other Corsicana operators have completed a well in the shallow sand, near the Fall River well, and report it a three-barrel producer of 43-gravity oil.

The Wewoka Trading Company is reported to have completed a gas well at Wewoka. This is the test that attracted the talent from Tulsa three months ago, when it was rumored that an oiler had been brought in. Connolly & Cunningham have taken a contract to drill a well at Wewoka.

At Bennington, in the Choctaw Nation, the second test on section 27-6-12 is being watched closely, but there is nothing to date to cause any excitement. The first test on the same section was dry.

Eighteen miles south of Okmulgee, at Hoffman, an important test is drilling. This is in the Creek Nation.

Personal and News Notes. J. S. Cullinan, president of The Texas Company, was in Tulsa last week.

F. A. Glass, who accumulated a comfortable surplus in the Sour Lake Field, is here with his two sons. Glenn Pool prices have temporarily stunned Mr. Glass. While F. A. Glass and his sons George and Charles were driving through the Glenn Field today with J. A. Chapman, a piece of the harness broke and the team ran away, throwing the entire party to the ground. George Glass sustained a dislocation of the hip, his brother was severely bruised and suffered a sprained wrist, and Mr. Glass, Sr., was badly shaken up. Chapman's clothes were torn to shreds, and he was cut in a dozen places.

The Oklahoma Natural Gas Company has amended its charter, increasing its capital stock from \$3,000,000 to \$4,000,000. The company gives its place of business as Oklahoma City, Guthrie, Enid, Shawnee, Collinsville, Bartlesville, Tulsa, Chicago, Ill., New York, and Pittsburgh, Pa., with D. T. Flynn and C. H. Ames of Oklahoma City, and T. N. Barnsdall, E. P. Whitcomb, and Glenn T. Braden of Pittsburgh, Pa., as incorporators.

Prof. Charles N. Gould, geologist at the Oklahoma State University at Norman, has spent six years studying the oil-bearing formations of the Indian Territory, and gives it as his opinion that only a small area of the productive oil and gas territory in this region has been developed. Recently he traveled over a good part of the Cherokee, Creek, and Choctaw Nations. He believes the principal development in future will be in the Choctaw and the southern part of the Creek Nation.

Holland S. Reavis

p. 27. New Incorporations. Territories. DeSota Oil Company of Tulsa, capital stock \$200,000, by Howard W. Sharp of Tulsa, Louis M. Elyea of Stroud, O. T., and Herman S. Whipperman of Perry, O. T.

Seneca Oil Company of Cleveland, O. T. Capital stock, \$100,000, by W. C. Newell and George E. Mauk of Cleveland, Fred I. Green of Enid, O. T.; Howard M. Sharp of Tulsa, I. T.; and others.

Hanna Oil Company of Pawnee and Tulsa, I. T. Capital stock, \$40,000, by G. L. Wheeler of Pawnee; A. V. Davenport and Robert B. Williamson of Tulsa. Home Oil Company of Cleveland, O. T. Capital stock, \$25,000 by William Blake, Louis F. Blake, and Benj. F. Kennedy.

Dutton Oil & Gas Company of Dutton, O. T. Capital stock, \$100,000 by R. L. Stansberry, W. H. Curies, and L. W. Frain of Dutton, and W. G. Williams of El Reno, and others.

Vol. 5, No. 22, April 19, 1907. p. 1-2. Muskogee-Wewoka-Beggs. No lack of new developments in the Indian Territory. Muskogee well not as large as was expected, but it is producing a paraffine-base oil and is considered an important discovery. Heavy crude at Wewoka and Beggs. Prairie Company runs 110,000 barrels a day, breaking all previous records. Building storage at the rate of more than a tank a day. Planning to ship 10,000 to 20,000 barrels a day by rail from Jenks to Beaumont. Mid-Continent stocks exceed 27,500,000 barrels. Earthen

storage in Glenn Field.

Holland S. Reavis

p. 22. New Incorporations. Texas. Humble Oil and Development Company of Houston. Capital \$3,500. Incorporators, O. H. Hermann, A. J. Binz, J. J. Settegast, Jr., and J. W. Lockett.

Territory. Navaho Oil Company of Cleveland, O. T. Capital, \$100,000. Incorporators, W. C. Newell, M. M. Sornberger, John F. Murphy, and others.

Vol. 5, No. 23, May 5, 1907. Glenn runs 80,000 a day. Pipe lines and producers took care of 2,400,000 barrels production from the big pool in April. Seventy-one wells completed in the field during the month, averaging 365 barrels each. Total Mid-Continent pipe line runs 3,614,283 barrels, an average of 120,476 barrels a day. Prairie Oil & Gas Company starts rail shipments from Red Fork to Corsicana. Oil developed in a test well at Morris, east of Okmulgee. Field operations and personal notes.

Numerous sensational press reports are going the rounds concerning the Noble gas well near Ochelata, I. T., which blew out its casing early in April. It is reported a 50,000,000-foot gasser, and is described as "the biggest gas well in the world."

T. H. Bass visited the Indian Territory fields last month, staying in Tulsa. He picked up some leases on the North Glenn Field, and near Wewoka, and Morris.

The following companies have been incorporated to do business in Oklahoma: The Rexall Oil Company of Muskogee; Capital stock, \$15,000. Incorporators, J. C. Fast, J. C. McShea, and H. H. Pen.

Rex Oil & Gas Company of Muskogee, Capital \$25,000. Incorporators, O. D. Revell, Jacob Spangenberg, and D. N. Fink.

Artesian water was encountered at a depth of 400 feet in a well drilling on the Townsley Place, near Sulphur, Indian Territory, last month. This led a local newspaper correspondent to send out a story predicting that oil would be struck at 1,500 feet.

The only refinery in operation in the Territory is at Muskogee, but plants are being installed at Tulsa, Chelsea, and Cleveland.

Holland S. Reavis

p. 9-10. Wildcat Notes.

p. 10. The White County Oil Company, of Russell, Arkansas, of which C. A. Darnell is president, has resumed work on a test well being put in there, after several days delay on account of machinery. W. A. Meagher is interested in the company.

p. 10. New Incorporations. Texas. North Texas Oil and Gas Company of Pottsboro, Grayson County. Capital \$30,000. Incorporators, A. P. Smith, John W. Sims, L. E. Crisp, E. T. Judd, and Frank Thompson.

Indian Territory. The Navajo Company of Cleveland and Tulsa, Capital \$100,000. Incorporators, W. C. Newell, John F. Murphy, M. M. Sornberger, and J. H. Sornberger, all of Cleveland.

Okindian Gas Company of McAlester. Capital stock, \$500,000 to develop gas wells. Arthur D. Lord, president; Charles Van Sickle, vice-president, and Edwin J. Streeter, secretary-treasurer.

Caddo Oil & Gas Company of Caddo. Capital stock, \$200,000, to develop a large area of oil lands recently leased. W. F. Clower, president, and general manager. H. W. Diffenderfer, vice-president, and A. F. Manning, secretary-treasurer.

Hugo Oil and Gas Company, of Hugo, and Morrison, Oklahoma Territory, Capital stock, \$100,000. Thomas Hardison and W. B. Gill of Hugo, and E. C. Ryan of Morrison.

Interstate Oil and Townsite Company, of Guthrie. Capital stock, \$1,000,000, by P. M. Morrill, W. C. Brady, J. G. Harris, J. H. Case, all of Hobart, O. T., and others.

p. 9. Wildcat Notes. Sherman, Denison, and Fort Worth parties are interested in a test well being put down at Pottsboro. The well is now down about 800 feet, and already three flows of fresh water have been found, with traces of oil.

Vol. 5, No. 24, May 19, 1907, p. 7. New Incorporations. Indian Territory. Caddo Oil & Gas Development Company, lately reported organized. Will erect and equip oil tanks at cost of \$10,000, and will drill for crude petroleum and gas. W. F. Clower president and manager.

The Western Oil and Fuel Company has been chartered with \$500,000 capital. The directors are F. T. Green of Enid, George E. Wank of Cleveland, H. M. Sharp of Tulsa, R. V. Sharp of Barberton, Ohio, and J. J. Tomlinson of Tulsa.

Oklahoma Territory. Paovo Oil Company has begun the construction of a 100-barrel oil refinery for experimental purposes. If the experiment is satisfactory, the capacity of the plant will be increased.

Crystal Oil and Gas Company incorporated with \$100,000 capital stock, by F. B. Feike, Thomas L. Eggleston, Jr. and George McCartney.

The Pottawatomie Oil and Gas Company, with \$1,000,000 capital, has been chartered. The directors are D. Campbell and V. V. Harris of Wewoka, I. T., George E. McKinnis, J. W. Robuck, J. W. Ruby, F. B. Reed, Harry Mead, I. Greenlee, W. P. Dix, and A. E. Kennedy of Shawnee.

Banner Oil and Gas Company, incorporated with \$500,000 capital stock, by Chas. R. Engelke of Oklahoma City, J. E. Flynn and F. J. Worden of Muskogee, I. T.

North Texas Oil and Gas Company has been organized with \$50,000 capital stock. It controls leases on several thousand acres of land near Pottsboro, and is now drilling for oil. A. P. Smith, president; L. E. Crisp, secretary, both of Weleetka, I. T.; and E. T. Judd of Pottsboro, treasurer.

p. 25. The St. Louis Petroleum Company. The St. Louis Petroleum Company, which filed articles of incorporation at Tulsa, I. T., has already acquired several thousand acres of land in Indian Territory. The property of the company has an estimated value of from \$5,000,000 to \$10,000,000. The company has incorporated with a nominal capital of \$150,000, which will be increased. The incorporators are George J. Kobusch, president of the St. Louis Car Company of that city, 375 shares; August H. Reller, president of the Bremen Bank of that city, 375 shares; Henry Luedinghaus, Jr., vice-president of the Espenschied Wagon Company, of that city, 375 shares, and Fred L. Sawyer, of Independence, Kansas, 375 shares.

Although the corporation was not effected until April 30, the organization was accomplished more than two months ago. Since early in the year, the company has been purchasing land in all parts of the Indian Territory, but particularly in the vicinity of Tulsa and Muskogee. Colonel J. B. Schoenfeldt, of Muskogee, who was formerly connected with the United States Department of the Interior, is a member of the company, and he is the active representative in the oil fields.

Vol. 6, No. 1, June 5, 1907, p. 7. New Incorporations. Oklahoma Territory. Economy Oil, Coal, and Gas Company incorporated with \$100,000 capital stock, by V. P. Biggers of Shawnee, S. D. Powell, J. Van Buskirk, J. R. McCants of Seminole, I. T., and others.

Indian Territory. Orient Oil and Gas Company of Mounds, capital \$100,000. F. R. Letcher of Muskogee, president. M. N. Baker of Dallas, vice-president. George M. Ransom of Toledo, Ohio, secretary. O. T. Letcher of Muskogee, treasurer. This company has acquired valuable leases in the Mounds and Glenn districts.

Canadian Valley Oil Company, capital \$100,000. Officers same as above.

p. 22, 24-27, 29. Commissioner of Corporations submits report on Standard Oil Company. Commissioner of Corporations Herbert K. Smith on May 20 transmitted to President Roosevelt the report of the Bureau of Corporations covering the operations of the Standard Oil Company, and its position in the petroleum industry, with a few excerpts printed below, with respect to violations of the Sherman anti-trust law.

In 1904 Standard Oil Company of New Jersey and affiliates, refined over 84 percent of the crude oil in the U.S., and produced more than 86 percent of

the illuminating oil in the U.S., and exported 86 percent of the same trade, transported through pipe lines nine-tenths of the crude oil from the older fields and 98 percent of the crude of the Mid-Continent or Kansas-Indian Territory fields, and secured 88 to 99 percent of the retail sales of illuminating oil in the United States. It also controlled similar proportions of production and marketing of gasoline and lubricating oils. In the pipe-line business in 1904, of the Eastern and Mid-Continent Fields, Standard had only one competitor, the Pure Oil Company, which handled one-twentieth of the oil of Standard's lines. Since 1867, Standard has had almost absolute control over the oil business in the United States.

Starting with the partnership of Rockefeller, Andrews, & Flagler, formed in 1867, these interests took the corporate form in 1870 of the Standard Oil Company of Ohio, with a capitalization of \$1,000,000. At that time, they controlled not over 10 percent of the refining business of the country. Within ten years of that date, the process of combination under these interests had been so rapid that they admittedly controlled from 90 to 95 percent of this branch of the oil industry, and their control of the pipe-line business had increased equally. In 1882 they formed the Standard Oil Trust, which included 14 companies, and a majority interest in 26 additional companies. The capitalization was \$70,000,000.

Nine individuals, acting as trustees, owned more than \$40,000,000 of the trust certificates issued in 1882, listed as follows:

John D. Rockefeller	191,700 certificates
Henry M. Flagler	60,000
Charles Pratt	54,000
O. H. Payne	50,000
William Rockefeller	32,000
J. A. Bostwick	34,000
W. G. Warden	29,400
John D. Archbold	7,000
Benjamin Brewster	<u>8,180</u>
	466,280

In 1892, as a result of a legal attack on this trust, the trust was dissolved. This did not affect the original control of the nine individuals over the entire concern, because the stocks of each of the various subsidiary corporations were not returned to their original holders, but were allotted to the holders of the trust certificates on a pro rata basis, with each of the nine trustees collectively owning a majority interest in each one of the constituent companies.

In 1898, contempt proceedings were started against Standard of Ohio, on the ground that it had not properly withdrawn from the trust. Thereupon, pending the decision, these interests selected the Standard Oil Company of New Jersey as a holding corporation for the constituent Standard companies, and increased its common stock to \$100,000,000 for that purpose. This company then gave its own stock in exchange for the stocks of various companies, leaving the original nine capitalists undisturbed. In 1904, Standard Oil Company of New Jersey controlled 10 refining companies, 4 lubricating oil companies, 3 crude oil producing companies, 13 pipe-line and transportation companies, 6 marketing companies, 16 natural gas companies, and 15 foreign concerns, besides having close affiliations with a considerable number of other concerns.

For many years, and until about 1900, the oil industry of the country rested almost wholly on two great Eastern Fields, the so-called Appalachian and Lima-Indiana Fields, in both of which Standard was dominant. In the five years ending with 1900, the oil from these fields was 95 percent of the total output in the United States. Since 1900, new large developments have been in the Mid-Continent, the Gulf Coast, and California Fields, with Standard dominating the Mid-Continent up to 1906. In 1905 to 1907, the Illinois Fields were developed, and Standard dominated these also. In 1907, the Mid-Continent and Illinois Fields produced 50 percent more than the Eastern Fields combined. Standard has more than 40,000 miles of pipe lines, and controls railway freight rates. In 1907, Standard owned 97 percent of tank wagon deliveries to small towns, covering 5,300 retail dealers.

Companies Controlled by Standard Oil Company of New Jersey in 1907, and now in Active Operation

Name	Capital Stock Authorized	When Incorporated	Where Incorporated
A. Companies Principally Engaged in Refining.			
*° Atlantic Refining Co.	\$5,000,000	1870	Pennsylvania
Corsicana Refining Co.	partnership		
* Solar Refining Co.	500,000	1886	Ohio
° Standard Oil Co. of California (formerly Pacific Coast Oil Co. and Standard Oil Co. of Iowa)	25,000,000	1906	California
Standard Oil Co. of Kansas	1,000,000	1892	Kansas
*° Standard Oil Co. of Indiana	1,000,000	1889	Indiana
*° Standard Oil Co. of New York	15,000,000	1882	New York
*° Standard Oil Co. of Ohio	3,500,000	1870	Ohio
° Vacuum Oil Co.	2,500,000	1866	New York
Security Oil Co.	3,000,000	1903	Texas
B. Lubricating Oil and Compounding Companies.			
Borne, Scrymaer Co.	200,000	1893	New Jersey
Chesebrough Mfg. Co. (Consolidated)	500,000	1880	New York
Galena Signal Oil Co.	10,000,000	1901	Pennsylvania
Swan & Finch Co.	1,000,000	1891	New York
° Vacuum Oil Co.	2,500,000	1866	New York
C. Crude Oil Producing Companies.			
* Ohio Oil Co.	2,000,000	1887	Ohio
* South Penn Oil Co.	2,500,000	1889	Pennsylvania
Washington Oil Co.	100,000	1887	Pennsylvania
D. Pipe line and other Transportation Companies.			
Appalachian Field.			
* National Transit Co.	25,455,200	1881	Pennsylvania
* New York Transit Co.	5,000,000	1892	New York
Crescent Pipe Line Co.	3,000,000	1891	Pennsylvania
Cumberland Pipe Line Co.	1,000,000	1901	Kentucky
* Eureka Pipe Line Co.	2,000,000	1890	West Virginia
* Northern Pipe Line Co.	4,000,000	1889	Pennsylvania
* Southern Pipe Line Co.	10,000,000	1890	Pennsylvania
Southwest Pennsylvania Pipe Lines	3,500,000	1885	Pennsylvania
Lima-Indiana Field.			
* Buckeye Pipe Line Co.	10,000,000	1886	Ohio
* Indiana Pipe Line Co.	1,000,000	1889	Indiana
Manhattan Oil Co.	150,000	1890	Ohio
Illinois Field.			
Ohio Oil Co.	2,000,000	1887	Ohio
Mid-Continent Field.			
Prairie Oil and Gas Co.	10,000,000	1900	Kansas
California Fields.			
Standard Oil Co. of California	25,000,000	1906	California
Tank Car Transportation.			
* Union Tank Line Co.	3,500,000	1891	New Jersey
E. Marketing Companies, engaged in direct sales to retail dealers and consumers by tank wagon and otherwise.			
Continental Oil Co.	300,000	1884	Iowa
Colonial Oil Co. (South Africa, Australia)	250,000	1901	New Jersey
Republic Oil Co.	350,000	1901	New York
* Standard Oil Co. of Kentucky	1,000,000	1886	Kentucky
Standard Oil Co. of Nebraska	1,000,000	1906	Nebraska
Waters-Pierce Co. (Incorp. 1878, nominally organized in 1900)	400,000	1878	Missouri
F. Natural Gas Companies			
Buffalo Natural Gas Fuel Co.	350,000	1886	New York
Commercial Natural Gas Co.	100,000	1892	Pennsylvania

Connecting Gas Co.	825,000	1892	Ohio
Eastern Ohio Oil and Gas Co.	5,000	1895	Ohio
Lawrence Natural Gas Co.	1,000,000	1886	Pennsylvania
Mountain State Gas Co.	600,000	1892	West Virginia
Mahoning Gas Fuel Co.	150,000	1886	Ohio
National Fuel Gas Co.	2,500,000	1902	New Jersey
*Northwestern Ohio Natural Gas Co.	2,775,250	1886	Ohio
Oil City Fuel Supply Co.	2,000,000	1892	Pennsylvania
People's Natural Gas Co.	1,000,000	1885	Pennsylvania
Pennsylvania Gas Co.	800,000	1881	Pennsylvania
Pittsburgh Natural Gas Co.	350,000	1888	Pennsylvania
Salamanca Gas Co.	30,000	1886	New York
Taylorstown Natural Gas Co.	10,000	1889	Pennsylvania
United Natural Gas Co.	1,000,000	1886	Pennsylvania
G. Foreign Companies			
Anglo-American Oil Co. (Limited)	4,866,500	1888	England
American Petroleum Co.	3,155,700	1891	Holland
Amerikanische Petroleum Anlagen G.m.b.h.	47,600		Germany
Colonial Oil Co. (South Africa, Australasia)	250,000	1901	New Jersey
Deutsch-Amerikanische Petroleum Gesellschaft	7,140,000	1890	Germany
Danske Petroleum Aktieselskab			Denmark
Konigsberger Handels Compagnie	547,400	1872	Germany
International Oil Co.	5,976,000		Japan
Imperial Oil Co.			Canada
Mannheim-Bremen Petroleum Aktien Gesellschaft	714,000	1896	Germany
Petroleum Raffinerie vormals August Korff in Bremen	357,000	1887	Germany
Stettin-Amerikanische Petroleum Import Gesellschaft			Germany
Societate Romana Americana	482,500	1904	Roumania
Societe pour la Vente de Petrole ci-devant H. Rieth & Cie.	318,450	1896	Belgium
Societa Italo-Americana pei Petrolia			Italy
Vacuum Oil Company Aktien Gesellschaft	2,030,000		Austria-Hungary

Since May, 1906, 8,000 separate offenses have been named in indictments, concerning railway transportation charges by Standard of New Jersey, under the Elkins Act of interstate commerce. In district court in Chicago, a conviction was secured by the government on 1,462 counts against Standard of New Jersey.

p. 32-33. Geological Structure of Mid-Continent Oil Region. In the geology of the southern field, the nomenclature by Taff in his report on the Arbuckle and Wichita Mountains has been followed, but with the exception of the territory around Madill and Wheeler, no data are available by which any geologic questions can be compared with Taff's work. The greater extent of the territory lying to the east of the 97th degree meridian belongs to the Cretaceous. A narrow strip of Carboniferous conglomerates, sandstones, and shales, occupy the ranges 1 and 2 East.

Historically speaking, the Indian Territory oil fields date only from about 1901. Some small wells were in operation in the Muskogee region in the year 1894, but little or no production was obtained from them before 1904. The following figures show the production of the Indian Territory-Oklahoma fields:

Years	Barrels
1900	6,472
1901	10,000
1902	37,100
1903	138,911
1904	1,366,748
1905, estimated	4,500,000
1906, estimated	9,500,000

The following shows the course of operations in this territory for the

		<u>1905</u>	<u>1906</u>
years 1905 and 1906:	Wells Completed	2,525	2,779
	Wells dry	349	350
	Wells gas	103	163
	Wells productive	2,073	2,266
	Average barrels per well	46.97	80

Vol. 6, No. 2, June 19, 1907, p. 1-5. Morris Well is a Big One. Brown Oil and Gas Company's No. 1 makes 1300 barrels in twenty-four hours. Development of the new pool is becoming active. Quaker Oil Company brings in a well in the southeastern extremity of the Glenn Field that starts off at 100 barrels an hour. Forty-acre lease sells for \$105,000. Rail shipments to Texas are increasing. Ambassador Bryce at Tulsa. Operations reviewed in detail.

Activity south of Canadian River. Great activity prevails south of the Canadian River as far as the Red River in Choctaw Nation, along the routes of the Gulf and Texas Pipe Line companies. The Canadian Oil & Gas Company is drilling a well at Eufaula, on the north bank of the Canadian River, and another at Hugo, south of the River, T. 6 S., R. 17 E. The Deming Investment Co. is drilling one in T. 8N., R. 15 E. A well is being drilled near Cabaniss, T. 5 N., R. 12 E.; another 3 miles from Herbert in the SE corner of T. 2 N., R. 11 E.; one at Olney in T. 1 S., R. 9 E.; 3 at Bennington, T. 6 S., R. 12 E.; one a mile east of Atoka, T. 2 S., R. 11 E.; one at Caney, T. 4 S., R. 10 E.; one is to be drilled at Caddo, T. 5 S, R. 10 E.; one is to be drilled at Boswell, T. 6 S., R. 14 E. A number of wells are being drilled near Holdenville, and many leases are being taken in that vicinity.

Among the famous oil operators of the east who have recently come to the Territory fields is W. L. Curtis, of Bradford, Pennsylvania, and Fred M. Aken of Lima, Ohio who are interested in the Shawnee Company, with holdings in the Glenn Field and other fields. Mr. Curtis has the distinction of having gone to Europe some years ago and established there the first agencies for the sale of oil by independent American dealers. He is a veteran in the oil business, having built his first derrick 37 years ago.

John R. Reavis

p. 10. Wildcat Notes. The newspapers last week reported that a water well near Marathon, in **Brewster** County, Texas, was producing oil by means of a windmill pump. The depth of the well was not stated. An examination of the geological formation of that section shows strata of granite and volcanic rock, and in the immediate vicinity of Marathon there are limestone beds. In places there is quartz crystal, containing small quantities of oil. Small quantities of oil have also been found in calcite crystals, but oil in paying quantities has not been known to exist in either quartz crystals, calcite crystals, or limestone beds.

p. 14. New Incorporations. Indian Territory. Boston Drilling Company, Bartlesville. Incorporated with \$25,000 capital stock, by F. T. Boston, O. G. Trego, and others.

Oklahoma Fuel, Light & Power Company, Oklahoma City, has secured 21-year franchise to sell, distribute, and manufacture natural or artificial gas in the city. Between 40 and 50 miles of mains will be laid. This company is a reorganization of the gas company which recently secured rights to supply Oklahoma City with natural and manufactured gas.

Vol. 6, No. 3, July 5, 1907, p. 5. New Incorporations. Texas. Petrolia Oil and Development Company of Fort Worth. Capital stock, \$45,000. Incorporators, P. M. Devitt, R. R. Lowden, and Robert Devitt.

Indian Territory. Commercial Oil and Gas Company of Fairview and Togo. Capital stock, \$50,000. Incorporators, J. A. McAuley, C. E. Heltzel, J. W. Shockley, and J. H. Willis of Togo; J. V. Shurtz of Galena.

p. 18. Report of a well at Marathon unfounded. Marathon, Texas, June 26. There is nothing here to justify the reports recently published in the newspapers to the effect that a producing oil well had been developed in this locality. On the hotel property, about 150 yards from the Southern Pacific depot, an old well about 80 feet deep was cleaned out last month and equipped with a windmill pump.

This well shows a very small quantity of seepage oil. Another well of about equal depth on the same property shows seepage oil. Conditions are decidedly unfavorable to the development of oil in paying quantities. The formations are broken, and in places are tilted up, until they stand on edge and protrude from the ground in this position. Marathon is 366 miles west of Houston on the Southern Pacific Railroad. William Kennedy, geologist for the Southern Pacific Railroad, and Lee Hager, both of Houston, were here yesterday.

Holland S. Reavis

Vol. 6, No. 4, July 19, 1907, p. 1-3. Another Big Morris Well. John Steele's No. 1 in section 29 shows for nearly 2,000 barrels at the start. Test Oil Company's No. 1 in section 32 extends the field a mile and a half southwest. T. H. Bass and other Texas operators are starting drilling rigs. Rumors of another pipe line to the Gulf Coast. The Texas Company pumping oil to Stuart, 120 miles south of the Glenn Field. Gulf pipe line nearly completed. Heywood Oil Company loading oil for shipment to Sabine. Great activity in tankage construction.

Wildcat Notes. A well has been started about 8 miles north of South McAlester.

A well was started at Olney on June 24, and is down between 800 and 1000 feet, with no showing. This is the second well drilled on this locality.

Operations have been suspended on the well at Bennington, on account of not being able to go deeper with a rotary. The present depth is a little over 400 feet. A showing of oil between 200 and 300 feet was reported in this well.

The well being drilled at Boswell, south of the Canadian River, is located on the north half of the southeast quarter of section 7, T. 6 S., R. 14 E. It is down 900 feet, with no showing of oil.

John R. Reavis

p. 6. Wildcat Notes. A report was sent out early in the month to the effect that oil had been struck in the test well drilling at Pottsboro, in Grayson County, nine and one-half miles west of Denison, Texas. No confirmation has been obtained. It is stated that no one is permitted to approach the well. Three flows of artesian water were encountered in the Pottsboro test before it had reached 1,000 feet.

Vol. 6, No. 5, Aug. 5, 1907, p. 1-6. Glenn Statistics for July. Runs from the big pool last month estimated at 2,635,000 barrels of which 1,953,000 barrels were handled by pipe lines and 682,000 barrels by producers. Eighty-eight producing wells completed, with new production amounting to 30,000 barrels. Bass well at Morris making 1,600 barrels. Gulf Pipe Line from Glenn Field to Sour Lake, Texas, will be completed this month. Large sales of oil in earthen storage to Texas purchasers.

Operations at Wewoka. Texas operators displayed considerable interest in the development at Wewoka, in the Seminole Nation, eight miles west of Holdenville, on the Rock Island. The oil found here is suitable for fuel in its crude state, testing about 28 gravity, and the Texas people are after the fuel oil. The only producer so far is the Wewoka Trading Company's No. 3. It is about 1,640 feet deep and came in flowing from 200 to 400 barrels. It is now on the pump and is making about 60 barrels, and some water. The oil is being stored in a ground tank, which now contains several thousand barrels. The Wewoka Company's first test, a short distance northeast of the producing well, did not go very deep. It is a water well. The second test, 100 feet south of the producing well, found the oil sand, but the hole was spoiled, and has been abandoned. A standard rig is on the No. 3. Two wells are drilling near the Wewoka Trading Company's well. The Seminole Hardware Company and other Wewoka interests are drilling on the hill about 1,500 feet west, and the Chupco Oil Company, composed of William Wiess of Beaumont and Hugh Hamilton of Houston, are drilling about 2,000 feet south. Both wells were only recently started. If there is any regularity to the oil formation, it looks as if these concerns have practically a sure shot. No oil has been shipped from Wewoka. The field is about a mile from the railroad.

The Santa Fe's development at Wheeler. For some time past, the fuel department of the Santa Fe Railroad Company has been drilling near the town of

Ardmore, in the Chickasaw Nation, about 40 miles above the Texas line. The exact location of the lands on which oil has been developed is at Wheeler, 16 miles northwest of Ardmore. The Santa Fe runs through Ardmore, but does not touch Wheeler by either branch or main line. All the machinery, lumber, and supplies employed in the drilling operations is hauled by wagon from Ardmore to Wheeler. The field was selected and all drilling has been done under the direction of H. B. Goodrich, a capable geologist and oil expert, well known in the oil districts of the Gulf Coast. Mr. Goodrich started out to find a good place to drill for fuel oil to be used to supply the oil-burning locomotives employed on the Texas lines, and he selected this district, where he has already met with a fair degree of success, and where there is an excellent promise of still greater success in the future. Backed by the ample capital of his company, he has been able to persist in the face of difficulties that might have discouraged many private companies. Mr. Goodrich is now drilling the twentieth well and he has found oil in every one but two. The production ranges from 20 to 150 barrels per well, there being one of the last named capacity. The oil is about 22 gravity and suitable in its crude state for fuel purposes. The sand is found at from 1,000 to 1,200 feet and is 40 or 50 feet thick, thus giving assurance of reasonably long life to the wells. The sand is loose and is not adapted to shooting. The formations are somewhat uncertain, and drilling is sometimes hard, owing to the tendency to cave, but some of the wells have been brought in with little difficulty. The company constructed an earthen reservoir, and this now holds 7,000 barrels of oil. A loading rack is being built at Ardmore, and a pipe line is being laid from that place to Wheeler, so that the company will soon be able to deliver oil to its locomotives. In the meantime, a syndicate has been organized outside of the railroad company, to utilize the gas developed in the new field at Wheeler, and also to drill for oil. This syndicate is now laying lines to deliver gas to the city of Ardmore, for public use, and is also drilling its first well for oil. The Santa Fe Company has not endeavored to corral the entire field; on the contrary it desires other companies and individuals to come in, and will offer them all reasonable facilities. The field is undoubtedly the most promising that has been discovered in the lower divisions of the Indian Territory, and is sure to attract attention.

Wildcatting in North Texas. There is great activity in prospecting for oil in northern Texas. A well is going down at Decatur, in Wise County, 35 miles southeast of Henrietta, Texas, and another in the Bridgeport Coal District in Wise County. At St. Jo, in Montague County, Wagner & Co. of West Virginia are drilling, and wells are also being put down at Jacksboro in Jack County, and at Pilot Point, in Denton County. Several wells are being drilled near Denison, one at Greenville, and one a few miles east of Paris. Fifteen miles southeast of Dallas, I. J. Willingham and Robert Gaston will do extensive work. Dallas people are beginning to take a greater interest in the oil business.

John R. Reavis

p. 14. New Incorporations. The Territories. Walters Gas and Oil Company of Walters, O. T., incorporated with \$40,000 capital stock, has leased gas and oil lands, and will at once drill test well. Machinery is now being arranged for. George H. Klein, S. H. Blair, J. M. James, and others are interested.

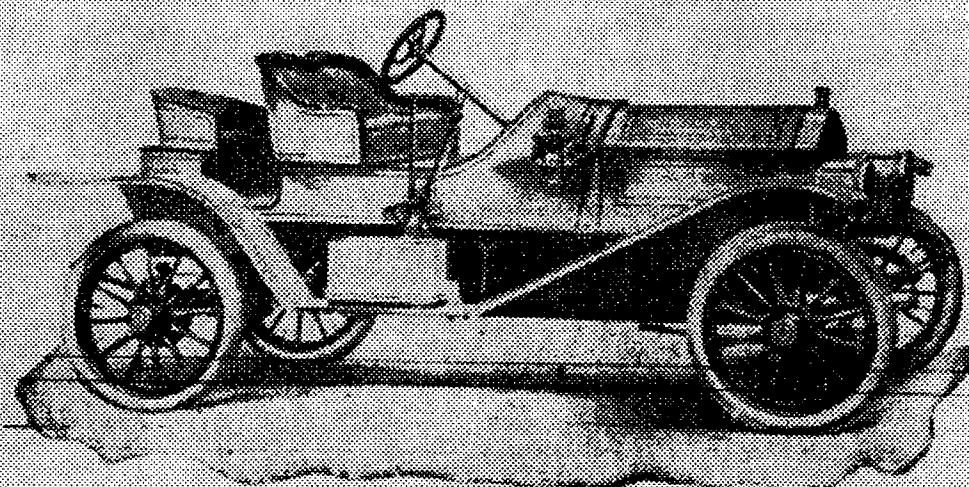
Producers Refining Company of Red Fork, I. T., has been organized, with \$45,000 capital stock, to establish oil refinery.

Mangum Oil and Development Company of Mangum, O. T., incorporated with \$25,000 capital stock, by P. A. Janaway, C. P. Hamilton, G. H. Abernathy, G. L. Wilson, and others.

Louisiana. Louisiana Gas Company of Shreveport, capital \$40,000. Incorporators, J. S. Connelly of Carthage, Mo.; J. B. Atkins of Shreveport; George F. Hammer of Carthage; and J. W. Jolly of Shreveport. This company has franchise to pipe Shreveport and Bossier City, La., and is laying a line from the Caddo Field to Shreveport.

Blomstrom "Thirty" Cars

A
LATER
AND
BETTER
DESIGN
BY
BLOMSTROM



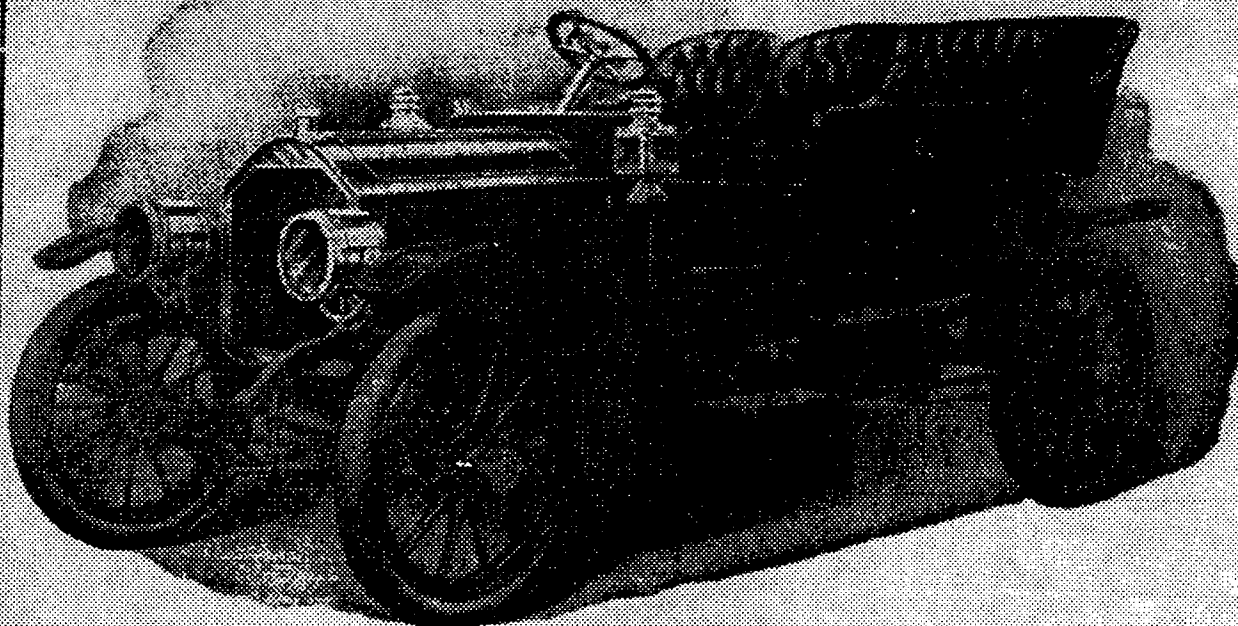
Motor
4 Cylinder
Vertical

Transmission
Selective
Type

Tires
12x3

Equipment
Includes
Lamps, Horn,
and Tools

BLOMSTROM "30" RUNABOUT
\$2250.00



BLOMSTROM "30" TOURING CAR
\$3250.00

TWO HANDSOMELY DESIGNED BODIES MOUNTED ON THE SAME BLOMSTROM "30" CHASSIS
LIGHT WEIGHT—AMPLE POWERED—EASILY CONTROLLED.

THE CAR THAT HAS THE BEST OF FOREIGN AND AMERICAN MECHANISM.

THE BLOMSTROM MANUFACTURING CO.,

LEIS & WIGHT STREETS

DETROIT, MICHIGAN

Catalog on Request

Prompt Deliveries

Vol. 6, No. 6, August 19, 1907, p. 1-4. Pumping oil into Gulf line. Glenn crude started into the eight-inch line for the first time on August 15. Testing now in progress on southern divisions. Work of pipe laying accomplished in exactly six months. The Texas Company has completed its lines to Dallas, and is laying south from that point to Corsicana. Production of wells in older portions of Glenn Field declining rapidly. Demand for oil in steel storage. Some more dry holes at Morris. Secretary Garfield meets oil men at Tulsa. History of the Zeke Moore case, involving land in the heart of the Glenn Pool

Tulsa, I.T., August 15. Oil was pumped into the Gulf Pipe Line Company's main line from the Glenn Field to Texas for the first time today. The last gap in the 8-inch line was closed on August 13 at a point a little north of Antlers, I. T., thus finally joining the north and south divisions, and completing the work of pipe laying. The first joint of pipe was laid February 13 at Sour Lake; therefore the line was exactly six months in building. It has been tested for about one-half its length, and the remainder will be tested between now and September 1. The oil was started from Watkins Station, at the north end of the line in the Glenn Field. Two 37,500 barrel tanks have been erected at each of the intermediate stations, which, in order, are located as follows: Chambers, in the Choctaw Nation, near South McAlester; Lenoir, in Lamar County, south of Red River near Paris, Texas; Big Sandy, in Upshur County, on the Sabine River; and Lufkin, in Angelina County. At Sour Lake, in Hardin County, the 8-inch line makes a junction with one of the Gulf Company's two 6-inch lines leading to Port Arthur, via Lucas Station, southwest of Spindletop. It will take 125,000 barrels of oil to fill the pipe the entire distance.

The Texas Company's line. The pipe line of the Texas Company from the Glenn Field was completed to Dallas, a distance of 270 miles, on August 13, and it is understood that testing is now in progress on the divisions south of Stuart. Glenn crude is being pumped through the line as far as Stuart, where there are two 37,500 barrel steel tanks and an earthen reservoir, the latter for temporary use. Pipe laying crews are now working on the line between Dallas and Corsicana. By September 1, or very soon after that date, the Texas Company will be pumping oil into steel storage at Dallas.

John R. Reavis

Vol. 6, No. 7, Sept. 5, 1907, p. 1-4. Now pumping oil to Texas. The Texas Company running Glenn crude through its eight-inch line to Sherman, and service to West Dallas will shortly be inaugurated. Gulf Pipe Line Company making final tests between Chambers, I. T., and Lenoir, Texas, preparatory to pumping Territory oil to the Gulf Coast. Gross runs from the Glenn Pool in August estimated at 2,635,000 barrels or 85,000 barrels a day. Field statistics for August. Developments at Morris of minor importance. Extension of the Glenn Pool to the northwest continues. New Wells at Muskogee.

Tulsa, I. T., September 1. The Texas Company is pumping oil through its 8-inch trunk line to Sherman, Texas, and in a few days will be pumping through to West Dallas. Sherman is about 200 miles south of Tulsa. The stations on the Texas Company's line south of Tulsa are: Henryetta, Stuart, Armstrong, Sherman, West Dallas, Corsicana, and two between Corsicana and Humble, the exact location of which remain to be selected.

Operations at Wewoka and in southern Indian Territory. A test well is starting six miles northeast of Wewoka, and another one mile east of Holdenville. The Okindian Gas Company's No. 1, on the Tennant Farm, four miles northeast of McAlester, is 1,950 feet without a showing. The drill penetrated seven feet of coal at 1,350 feet. The South Canadian Oil & Gas Company's test near McAlester is 2,665 feet deep, and two feet in sand, with gas showing from bottom of the hole. This well has a fishing job, but the drillers expect to get it cleaned out and drill in this week. The Swastika Petroleum Company is said to be preparing to drill on its holdings 10 miles south of Morris, and a test is to be started near Flat Rock, P. O., also one near Calvin in the Choctaw Nation.

John R. Reavis

show you oil and liquid asphaltum 10 to 240 feet in wells, right on railroad and close to good towns near Hope. This, with strong sulphur water, are my indications. I will give you free 1,000 acres of leases of late date on tenth royalty, to sink one, and, if necessary, two test wells, and you sink them on your own leases, and own them yourself, except the tenth royalty. My object is to test the territory, no drilling having been done here except shallow wells for water, as above. The 1,000 acres of leases are worth more than 10,000 acres in most unproven territory. Come and investigate at once. Will not kill time for you, but will show you quickly; nor do I want you to come unless you mean business; though I well expect you to turn the proposition down if not suited.

Address A. P. Dyke, Hope, Ark.

p. 22. Sketched from a Glenn Pool Derrick. Captain C. H. Hammett. Within the past sixty days Captain C. H. Hammett has made two important sales of Glenn Pool property, one a 40 acre lease to the Producers Oil Company of Houston, Tex., for \$105,000, and the other a 26 $\frac{2}{3}$ percent royalty in the famous Crosbie lease to C. E. Barrett of Houston, Tex., for \$160,000 making a total sum of \$265,000. This represents only a little more than half the amount Captain Hammett will have taken out of his Glenn Pool holdings, when the terms of his recent sales are fully complied with. He made his first appearance in the Glenn Field in May, 1906, investing a moderate sum in leases, so that he will have cleared up about a half million dollars in 15 months. Last January, he leased to J. E. Crosbie the property in sections 8 and 9, on which Crosbie has obtained such heavy production, and according to the terms of the lease, he received 40 percent royalty, of which he sold some time ago to the Gypsy Oil Company 13 $\frac{1}{3}$ percent for \$33,333.33; thus his interest in this royalty was cut down to 26 $\frac{2}{3}$ percent, which, for some time before, he sold it to Mr. Barrett, was paying him in the neighborhood of \$20,000 a month.

Captain Hammett's method of doing business is typical of the general plan followed in the Glenn Field, and by which it has been exploited. He has done all his work through companies. The government regulation of Indian oil lands makes it desirable to follow this plan. Captain Hammett's companies have been close corporations. It is only since 1904 that he has been in the oil business. Years ago he was a member of the real estate firm of Hammett & Davidson, of Kansas City, Mo., and carried on extensive operations in connection with the real estate firm of Hammett, Anderson, & Wade, of St. Louis. B. F. Hammett, of the latter firm, is a brother of Captain Hammett, and some years ago moved to El Paso, Tex., where he was elected mayor several times and where he made a large fortune. Captain Hammett is a born speculator. He has been in almost everything in a business way, including banking, lead, zinc, gold and silver mining, cattle ranching, railroad building, etc. He assisted D. R. Francis in organizing the Mississippi Valley Trust, in St. Louis, and his mining operations have been on an extensive scale in the lead and zinc districts of Missouri, and the silver and gold districts of Colorado and Nevada. It was in 1904 that he chanced to come into the Indian Territory, and secured some leases at Alluwe, in the Cherokee Nation. He drilled the first well in that district, and was Alluwe's pioneer producer. His operations there were very successful. He organized the Salt Creek Oil Company, the Marian Oil Company, and the Superior Oil Company, all of which had extensive and profitable holdings. He built the railroad running from La Porte to Houston, in Texas, and another railroad in Mississippi. In all these extensive operations, he has made and lost several fortunes. He is a game loser as well as an ardent winner. As illustrative of his unshaken nerve under trying circumstances, it is told of him that once while sitting at dinner with his family, he received a telegram announcing a loss that amounted to \$150,000. He continued his dinner, and no member of his family suspected from his demeanor that the telegram contained anything unusual. He sustained a still greater loss with the same good temper, when years ago, he went to New York to close the sale to Jay Gould, of a railroad he had built in Mississippi. The sale was to realize him about \$3,000,000. The papers were ready for Gould's signature, and he and Captain Hammett were in the magnate's private office alone. Just as Gould picked up a pen to sign his name and finally close the matter up, a messenger came in with a

cablegram for him. It announced the failure of the Barings in London, one of the greatest financial houses in the world. Gould dropped his pen and told Captain Hemmett he would have to take the matter up at a later time. Things had been completely upset by the failure of the Barings. Captain Hammett went back to St. Louis without his \$3,000,000. There was a flood in the Mississippi River country. The water broke over levees in Mississippi, and washed the railroad away, so that not a dollar was ever realized from it. Captain Hammett's taste is for real estate, and at times his land holdings have been enormous. At present he owns a large acreage within the city limits of Sapulpa and Muskogee, two of the most flourishing young cities in the Indian Territory. He is also owner of eighty acres of improved land within the limits of the city of Chicago. Just now he is in Chicago on a big land deal in Wyoming, and another in western Canada. He comes to Tulsa occasionally, but his business here is left almost entirely in the hands of his son, A. Miller Hammett. Captain Hammett is a bird of passage. His home is under his hat. He was born in the little town of Huntsville, Mo., and is proud of his native state. (Portrait picture also on p. 22).

Vol. 6, No. 8, Sept. 19, 1907, p. 1-5. 1907 Oil's Greatest Year. Records for eight months indicate that the production of crude petroleum in the United States will exceed 150,000,000 barrels, of which nearly four-fifths will be credited to the newer fields of Illinois, the Mid-Continent region, the Gulf Coast, and California. Mid-Continent pipe line runs to September 1 aggregate 27,050,100 barrels, and a total production of 46,000,000 barrels is indicated for the year. Glenn Pool the largest single factor in swelling the country's oil output.

p. 10. New Incorporations. Oklahoma. Progress Oil, Gas, and Mining Company of Cleveland incorporated with \$100,000 capital stock, by Thomas F. Gailey, O. C. Wing, J. F. Height, and others.

Indian Territory. Bartlesville Oil Refining Company, organized with William A. Coutant of Oklahoma City, secretary-treasurer and general manager. Brick buildings will be erected; cost of buildings and machinery, \$125,000. Product, all refined oils and all by-products of petroleum. Daily capacity, 1,000 barrels of crude oil. Principal address, Oklahoma City, O. T.

Lone Star Oil and Gas Company of Hoffman. Incorporators, G. E. Carney, J. W. Brown, D. W. Kinsey, and B. B. Halbert. Capital stock, \$50,000.

p. 16-17. Sketched from a Glenn Pool Derrick. J. E. Crosbie. On the window of his office in the Turner Building in Tulsa, Mr. Crosbie had this simple sign painted: "J. E. Crosbie, Oil Producer". That is what he is and has been over a good deal of the world - oil producer. Among the many operators of wide and varied experience in the Glenn Field, no one of them has seen service in so many different climes as he. And yet he is a young man - just in the prime of an unusually vigorous and robust physical manhood.

He was born beneath the shadow of an oil derrick at Petrolia, Canada, and he knew oil from the days of his childhood. The Petrolia Oil Field is the oldest on the American continent. Oil was developed there before it was in Pennsylvania forty years ago, and Crosbie had an uncle, J. W. Crosbie, who was one of the pioneers of that field, and his work was done with an old pole tool rig. Young Crosbie went to learn the business with his uncle, and he learned it from the bottom up. He knows everything there is to be known about drilling a well, and this has been one of the secrets of his success in the Glenn Field, as well as in other fields. He never gets a bad hole. J. W. Crosbie, his uncle, went to Burma, India, and was the pioneer in opening up the oil field there, which has since proven to be of great importance in the petroleum trade of the world. From there he went over into the Straits Settlement in the Malay Archipelago and drilled for oil in the island of Sumatra. His young nephew accompanied him, and was there five years altogether. They used the same old pole tool rig they had been accustomed to at their home in Canada. They built a pipe line 125 miles long, and a refinery down on the seashore.

J. E. Crosbie tells of some thrilling experiences he had in the five years he spent in Sumatra. His uncle died from the effects of the tropical climate, it being right under the equator, and he was left to carry on the

work alone. He had no labor except Chinese coolies, and all the material, machinery, and supplies for the field had to be carried from the coast, a distance of 125 miles, on small streams of water and human shoulders. Every piece of steel for the pipe line had to be transported in the same tedious and laborious manner. For months at a time he did not hear a word of English spoken, and learned to speak the native language with fluency. He is probably the only man in this part of the country who can speak the Malay tongue. He got some big production in that far away field, bringing in one gusher of 3,000 barrels, which could not be got under control for two weeks. The oil was of high gravity, testing about 44 degrees Baume, but the expense of getting supplies into the field, and the oppressive climate, made Mr. Crosbie determined to leave the country.

He then went over into West Africa and prospected for oil there for some time, but again the climate was very bad, even worse than in Sumatra. The country was full of swamps, and the most deadly fevers prevailed. He found some oil, but the outlook, on the whole, was not inviting, and he then went to visit the oil fields in Germany, where he had a brother. From there he returned to Petrolia. It was about this time that Spindletop burst upon the world with its lurid glare, and Crosbie went there to mingle with the throng, but he failed to get a piece of ground, and took a contract to drill some wells at Sour Lake for the Atlantic and Pacific Company and the Sour Lake Springs Company. He drilled there and at Dayton, Humble, Batson, Big Hill, and at other points, more than 150 wells, and never had a bad hole. He secured some leases and became a successful producer. From Texas he came to the Indian Territory, arriving at Tulsa December 1, 1906. On the 20th of December following, he closed a deal for the Jacob Anderson lease of 100 acres, partly in section 8, partly in section 9, of the Glenn Field, paying \$12,000 and a royalty. He brought in his first well February 1, 1907, and his success was pronounced from the beginning. He long ago paid out on his lease, and now has 22 wells producing 6,000 barrels of oil per day. Mr. Crosbie has been one of the most successful operators in the Glenn Field. His present income is in the neighborhood of \$1,000 a day. On a conservative estimate, he stands to clean up a quarter of a million dollars on his lease. He has other holdings in and about the Glenn Field that have not yet been developed. He is just now beginning work on some of these. For recreation, Mr. Crosbie goes in for good horses and other livestock. He keeps a pair of fast roadsters in Tulsa, and in Canada he has two or three fine farms upon which are many blooded sheep, cattle, and horses.

John R. Reavis

Vol. 6, No. 9, Oct. 5, 1907, p. 1-5. Heavy Runs of Glenn Oil. Gulf Pipe Line officials in Tulsa. W. L. Mellon, president of the Gulf Pipe Line Company; C. H. Markham, vice-president; J. F. Fisher, general superintendent; C. F. Moore, assistant general superintendent; and Lee Gordon, superintendent of pipe lines in Texas, arrived here Monday, September 23, and remained three days.

W. D. Ford goes into business for himself. William D. Ford, formerly chief of the lease division of the United States Indian Agency at Muskogee, and more recently head of the department handling the removal of restrictions, has quit the government service and organized the firm of W. D. Ford & Co., with offices in the Bostic Building at Muskogee.

Notes. A. H. Reiler, cashier of the Bremen Bank, and Paul Gast, of the Gast Brewing Company, both of St. Louis, were in Tulsa last week. They are interested in the St. Louis Oil Company which has valuable property in the Glenn Field. W. H. Anders is the company's local representative.

H. B. Goodrich, who has charge of development work at Wheeler, I. T., for the Santa Fe Railroad Company, stopped at Tulsa on his return a few days since from a visit to Chicago. He says that drilling in the Wheeler Field has become easier than it was formerly, and that it is now possible to bring in a well in twenty days from the time of starting. He believes the Wheeler Field is capable of developing about 70,000,000 feet of gas per day. A line is now being laid to pipe this gas into Ardmore, a distance of sixteen miles.

T. H. Bass is becoming a regular bird of passage. For a while he was here in Tulsa, looking after his interests in the Glenn Field, and then he went to Okmulgee and joined the Morris contingent, and secured some fine

production. Later he was heard from in Washington, and now the report comes that he has gone back to his original first love and is once more operating on Spindletop. It's a safe bet that he will be prospecting in the new Utah fields and in Mexico before the year is out. He is already interested in a gold mine in Arizona, and runs out there when he isn't busy elsewhere. His mine is making regular shipments to the smelter now, and it looks like a winner.

John R. Reavis

p. 12-14. New Incorporations. Oklahoma Territory, Oklahoma Refining Company of Oklahoma City has increased its authorized capital from \$50,000 to \$1,000,000 and will enlarge its plant from 5,000 barrels to 25,000 barrels monthly capacity. George A. Todd is president.

Oklahoma Oil and Transportation Company, incorporated with \$100,000 capital, by F. W. Bruehman, H. H. Todd, and Porter H. Morgan.

Indian Territory. Glenn Oil Company, incorporated with \$43,000 capital, by G. W. Barnes, E. C. Bothwell, F. A. Leovy, and H. Y. Arnold.

Crosbie Oil Company, incorporated with \$10,000 capital, by F. A. Leovy, H. P. Langworthy, and J. E. Crosbie.

p. 21. Sketched from a Glenn Pool Derrick. Robert Galbreath. (with portrait picture) by John R. Reavis. Robert Galbreath is very properly called the father of the Glenn Pool. He drilled the first well there, and how he happened to do so and the circumstances attending it make a very interesting story.

Mr. Galbreath was born in Ohio, and although it is a famous oil state, he knew nothing of the oil business until he came to the Indian Territory in June 1901. He worked on a farm in Ohio until he was 21 years old, and then took up the training of fine horses, which he pursued successfully for a number of years. In 1888 he went out to California to see a brother who was living there, and in January 1889, he returned home by way of the Indian Territory. He awoke early one morning as the train was passing through the country between Eufaula and McAlester, and when he looked out of the window of the car, he was so fascinated by the beauty of the country that he forgot to eat his breakfast. He made a resolution that he would come back to the Indian country as soon as opportunity offered.

He went on to Mount Sterling, Ohio, where his home was at that time, and in March following, after President Cleveland had signed the bill creating the Territory of Oklahoma, he made up a small party and came to the town of Edmond in that Territory, where he lived for some time. He secured a contract to carry the mail between Edmond and the Sac and Fox Indian Agency, a distance of sixty miles. He built thirty miles of road himself, with some assistance from the citizens of Edmond, and afterwards established a freight line over the same road.

In 1897, he went to Oklahoma City and engaged in the real estate business under the firm name of Colcord, Galbreath, & Shelly. In the year 1901, they sold a million dollars worth of real estate. Galbreath took \$20,000 as his share of the profits, and came over to the village of Red Fork, a few miles south of Tulsa, in June, 1901. Dr. Bland and Messers. Heidrick and Weeks about this time brought in the first oil well in the Red Fork District. The production was small, being only a few barrels, but this was enough to excite further drilling, and Galbreath drilled a number of wells in this vicinity, this being his first experience in the oil business, and had but moderate success.

In July, 1901, he went down to what is now the Glenn Field. In making the trip, he followed the grade of the old Battle Ax Railroad, an enterprise that was begun several years before, but never completed. The southern terminus of the grade is in the midst of the Glenn Field. When he reached the end of the grade, he stopped and looked at the country. He was struck by its appearance, and had an impression at the time that it was good oil territory. His observations at Red Fork had enabled him to form some judgement as to geological formations favorable to the production of oil. He went to the Eck E. Brooks farm and camped with a man named Wood. He resolved that he would obtain some leases if possible. He was particularly impressed with that portion of the field lying between the two well known hills or buttes on the south, and the hill on the north adjoining the Ida E. Glenn allotment, the sections included being 10, 15, and 22.

He discovered that no leases could be obtained, owing to the fact that no allotments had been made there, and the Department of the Interior was not ready to approve leases. He had to wait three years before he could secure a lease. All this time he was doing more or less drilling in the vicinity of Red Fork. Finally he was ready to commence operations in what is now the Glenn Field, but by this time his money had run low and he did not have sufficient money to undertake the enterprise alone. He went to a dozen or more of his friends and asked them to join him, but all declined.

He persisted, however, and finally struck Frank Chesley, who became interested and agreed to see him through on the first well. They got the first rig up on the Ida E. Glenn tract, SW-1/4 of SE-1/4 of Sec. 10, T. 17 N., R. 12 E., on the 1st of September, 1904. Drilling progressed slowly, there being many hindrances and interferences. It was on the morning of November 22 that they measured up to see how deep they were. Galbreath had been up all night, watching the drill, for he had hoped to get oil in the Red Fork sand, at a depth of from 1,350 to 1,400 feet. They discovered to their surprise that they were 1,438 feet deep and that they had passed the point for the Red Fork sand. This was a very serious disappointment. Galbreath, however, determined not to abandon the undertaking. He still had faith that there was oil in the country. He gave instructions to go on down to 1,600 feet, and then went to his little shack to turn in for a very much needed rest. His associate, Chesley, took his place at the well, and Galbreath had hardly gotten to sleep when Chesley came in and called him, saying he wanted him to go down to the well at once. Chesley then began to unwrap something he had in a paper, and Galbreath smelled the oil. He surmised at once that they had struck an oil sand, and jumped out of his bunk in a hurry. Chesley had a good looking piece of oil sand, which Galbreath saw at once was different from the Red Fork sand, and something new. They found the well making a little oil. It kept getting better during the day, and by the next morning, the oil went over the derrick. That was a great moment for Galbreath. He felt that his fortune was made, and as it turned out, he was not mistaken.

The well settled down to about 80 barrels, being near the eastern edge of the pool. They started another well 1,600 feet to the southwest, which came in making 800 barrels. This was the signal for tremendous excitement, and from that moment there was one of the greatest struggles for oil leases in the vicinity ever known in the history of the oil business. Galbreath and his associates secured 1,600 acres in leases, but were unable to hold them all, finally freezing on to 1,200 acres. Most of this land has proven highly productive. At one time, Galbreath and associates had wells that were capable of producing nearly 20,000 barrels a day. His production is still very large, and he owns much of the most valuable land in the Glenn Field. It has made him a rich man.

He and one of his associates, C. F. Colcord, are preparing to erect a ten-story modern fireproof hotel in Oklahoma City next year, which will cost them not less than a quarter of a million dollars. Galbreath is very much attached to Oklahoma City, and nearly all of the money he has made in the Glenn Field has been invested in that place. He is a plain man, of simple tastes, and is very fond of riding with the fox hounds. He has some of the best bred dogs in the United States, having recently secured a number from a famous breeder in Kentucky for which he paid a top price. These hounds are not only used in fox hunting, but are employed in wolf drives. He and a number of his friends will take his pack over to Arkansas for several weeks this fall and have some royal sport chasing Mr. Fox in that country.

Vol. 6, No. 10, Oct. 19, 1907, p. 10. New Incorporations. Oklahoma. The Midland Oil Company of Oklahoma City, capital stock \$50,000. Directors, C. H. Felton of Cleveland, Ohio, George Silsby of Saginaw, Mich., L. E. Patterson of Oklahoma City.

p. 16-17. Sketched from a Glenn Pool Derrick. David F. Connolly. by John R. Reavis. When visitors go to the Glenn Field, they always have a word of praise for the trim, orderly, and business-like appearance of the property of the Associated Producers Company, comprising 160 acres, being the S-1/2 of

SW-1/4 of Sec. 15, T. 17 N., R. 12 E., and the N-1/2 of NW-1/4 of Sec. 22, T. 17 N., R. 12 E. Notwithstanding the fact that there are 23 producing wells and 11 big steel tanks on this farm, it is as clean as the front lawn of a residence, and, as a matter of fact, there were grown on it this last summer 63 tons of good hay. It has on it three well-kept residences, and a barn, and is surrounded by a good fence. The wells have produced nearly 2,000,000 barrels of oil, and yet the rigs look as clean as if they had just been erected. There is no slush or waste on the ground, and the impression made is that the people who operate this property understand their business.

The manager of the Associated Producers Company is David Francis Connolly, who is young in appearance, but old in experience. His boyhood and youth were spent in Titusville, right in the heart of the great Pennsylvania oil region, and he has been in the business since 1878. He began at the bottom round of the ladder, and learned all the details of drilling and operating wells. Trained in the school of experience, he became a practical operator on his own hook in 1882, and in 1889 organized the firm of Connolly Brothers, there being five brothers in the concern. They made Bradford their headquarters, and operated extensively throughout Pennsylvania, opening more than 100 wells. The firm is still in existence.

In 1889, D. F. Connolly became connected, as manager, with the Associated Producers Company, an old and established oil company of the east, and thus operated throughout Pennsylvania, West Virginia, and Ohio.

He made two or three trips to the Mid-Continent Field, looking out for new production, but it was not until March, 1906, that the Associated Producers, through him, became a factor in the development of the Glenn Field. It was at that time that he succeeded in buying in fee the Corbray 160 acres, described above, for \$12,000. It was freedman land, and under the act of Congress, the owner had a right to sell and convey title. Later on, Mr. Connolly bought 320 acres adjoining the Corbray land on the east, but 10 of this was subject to a lease held by Galbreath, Chesley, & Colcord. The other quarter is east of the line of production and has been used as a tank farm.

Mr. Connolly drilled in his first well in July, 1906, and as soon as he began to have any production, he commenced building steel tanks. He was the first private operator in the field to do this. He saw at once that the pipe line companies would not be able to handle all the oil. The result was that while he sold his share of oil to the pipe lines, he has always had storage room for his surplus, and has never had to hold his wells in check. He has built nine 37,500-barrel tanks and twenty-four 35,000-barrel tanks, which now contain 1,177,500 barrels of oil, the largest amount held in storage by a private operator in the field. He is building three additional 35,000-barrel tanks, which will give him a total storage capacity of 1,282,500 barrels.

A company has just been formed under the name of the Okla Oil Company, to take over all the holdings of the Associated Producers Company in the Mid-Continent Field, including those of the Glenn Field. Of this new company, Mr. Connolly is vice-president and general manager. He was never a stockholder in the Associated Producers Company, but has a large interest in the new company, the other stockholders being his old friends of the Associated Producers Company. The new Okla Oil Company has extensive holdings outside of the Glenn Field, and these are to be developed in the near future.

Mr. Connolly has purchased a lot in Tulsa, and is going to build thereon a handsome residence, which is to be his home in the future. His intimate knowledge of the oil business, and his good judgment, to say nothing of a pleasing and engaging personality, make him a valuable addition to the citizenship of the new state of Oklahoma.

Vol. 6, No. 11, Nov. 5, 1907, p. 1-5. Runs 184,477 barrels a day. Drilling in the southern part of the Territory. So far no great success appears to have attended the efforts to find oil in the Choctaw Nation and the southern part of the Indian Territory. At Bennington, the most recent test has been abandoned at a depth of 410 feet for lack of funds. At Caddo, in the Choctaw Nation, a well has been commenced, and on October 20 was down about 100 feet.

About nine miles north of McAlester a well was drilled to a depth of 1,300 feet when operations were abandoned. At Wewoka, in the Seminole Nation, the Chupeo Oil Company is drilling, and on October 20 this well was down 1,300 feet. On the same date, the Wewoka Realty and Trust Company had just commenced a well. The original well at Wewoka is making about 40 barrels a day. At Madill, a well completed last year is making 5 barrels a day with a considerable showing of gas. Development at Madill is at a standstill. At Ada, near Shawnee, a well was drilled to a depth of between 1,200 and 1,300 feet, with a small show of oil, and was abandoned. At Coalgate, a well was drilled 1,000 feet deep, the hole was spoiled, and the well abandoned.

John R. Reavis

p. 12. Wildcat Notes. George A. O'Hara and A. C. Martin are securing leases near Dardanelle, Ark., for the purpose of drilling for oil and gas.

The Russelville Gin, Oil, & Mineral Company has been incorporated at Russelville, Ark., with William Brooks as president, and proposes to drill for oil in the vicinity of Russelville.

A company to be known as the Siloam Springs Oil and Gas Company will be incorporated with \$6,000 capital, to drill test wells near Siloam Springs, Ark., on the Kansas City Southern Railroad, 500 miles north of Beaumont.

p. 12. New Incorporations. Indian Territory. B. J. Murphy Oil Company, incorporated at Tulsa, by B. J. Murphy, J. F. McGinley, and R. W. Kellough.

Oklahoma Territory. Columbia Oil and Development Company of Oklahoma, incorporated with \$500,000 capital, by A. V. Snell of Oklahoma City, Charles C. Lancaster and Herbert E. Smith, both of Washington, D.C.

Ozark Oil and Gas Company of Cleveland, incorporated with \$200,000 capital stock, will engage in the production of crude petroleum and gas. E. B. Greenhaw, manager.

Portage Trail Oil Company of Guthrie, incorporated with \$100,000 capital stock, by A. J. McMahan of Oklahoma City, C. A. Barnholth of Akron, Ohio, and C. E. Brown of Cleveland, Ohio.

Consolidated Oil and Gas Company of Perry, capital \$100,000. Incorporators, J. E. Dolezal, E. D. Davis, and others.

p. 16. Natural Gas Development near Fort Smith, Ark. A correspondent of the Oil Investors' Journal, writing from Fort Smith, Ark., states that careful inquiry and personal inspection have led him to believe that there is a little promise of oil development near Fort Smith. Within a radius of ten miles of that city, however, there are over sixty gas wells, producing probably 100,000,000 feet of natural gas daily, all of which is piped to Fort Smith, where it is used in most of the private residences, stores, business blocks, and hotels, and in many manufacturing establishments for fuel, lighting, and heating purposes. The Mansfield Gas Company owns the gas lines, and after January 1, 1908, will drill more wells for the purpose of meeting the increased demand for gas. The Arkansas and Territorial Oil and Gas Company, organized for the purpose of prospecting for oil, controls a large acreage near Fort Smith, and has drilled in several gas wells. This company sells its gas to the Mansfield Company. The Arkansas and Territorial Company also expects to do additional drilling in January. The quality of gas secured at Fort Smith is good, being free from sulphur and other noxious ingredients. Although there may be no oil immediately adjacent to Fort Smith, the Journal's correspondent states that a personal knowledge of the indications found at many places in Arkansas, justifies the prediction that there are some great oil pools in the state, which will be developed in future years. Oil scum is found on the water in many places, and springs are frequently polluted with the oil seepage.

Vol. 6, No. 12, November 19, 1907, p. 1-4. Big Well at Anse La Butte. Drilling operations near Caddo. The Caddo Oil and Gas Company, a company organized at Caddo, in the Choctaw Nation, is drilling a well about 5 miles northwest of that place. They have a standard rig and are working two shifts. When last heard from they were down 700 feet. There is considerable evidence of oil in that country. O. M. Robertson, who has a farm in section 3, T. 5 S., R. 9 E.,

not very far from Caddo, was recently drilling a water well, when, at a depth of 80 feet, the drill passed through a 5-foot oil sand, which was immediately under 22 feet of limestone. Oil came up in sufficient quantities to spoil the water, but Mr. Robertson drilled deeper and cased the oil off. It is expected that considerable drilling will be done in the vicinity of Caddo within the next few months.

John R. Reavis

p. 9. New Incorporations. Indian Territory. Ardmore Asphalt, Oil, Gas, and Mining Company of Overbrook has been organized with \$5,000 capital stock. It is proposed to first develop asphalt lands, and then drill for oil and gas. W. B. Frame is president, J. N. Dyer, vice-president, and Harrold M. Wallace secretary-treasurer.

Main Oil Company of Tulsa. Incorporators, Jesse I. Gillespie, M. O. Gillespie and William Miner. Capital stock, \$10,000.

Oklahoma Territory. Glenn Pool Independent Oil and Gas Company of Meeker. Capital stock, \$500,000. Incorporators, N. L. Fogle of Meeker; J. E. Whitley and W. I. Belle of Kiefer; G. W. Brown and J. C. Freeman of Cleveland.

P. 12. Oklahoma formally admitted to the Union. President Roosevelt at 10:16 a.m., Washington time, on November 16, signed the proclamation declaring Oklahoma a state - the forty-sixth to be admitted to the Union. Later in the day, Governor C. N. Haskell and the other officers of the new state were sworn in at Guthrie, Okla., the ceremonies being given a picturesque turn through the participation of Indians, who furnished both oratory and music. Frank Frantz, territorial governor of Oklahoma, was not present at the inauguration. He and Governor Haskell abused each other liberally in the gubernatorial campaign, and the differences between them apparently have not been patched up. Other officials of the territorial government were not invited because one of them is a negro, and the color line is drawn by the new administration. On November 17, Governor Haskell issued a call for the legislature of Oklahoma to meet December 2. He left the place of meeting open. This is taken to mean that the city which gets the session of the legislature will have to offer inducements. There will be 92 democrats and 17 republicans in the lower house, and 39 democrats and 5 republicans in the senate.

p. 12. Senator Bailey got his facts mixed. The Texas Company was organized under the general laws of Texas in 1902, by those who in the main are its present stockholders. Included among the original share holders were ex-Governor J. S. Hogg, Judge R. E. Brooks, Hon. J. W. Swayne, and many other well-known citizens of Texas... Besides laying a pipe line from Tulsa, Okla., to the Gulf, it has built expensive plants at Dallas, Port Arthur, and Port Neches... Mr. Cullinan, who is the president of the Texas Company, is not a republican and never was... He was a consistent democrat when he lived in Pennsylvania.

Vol. 6, No. 13, Dec. 5, 1907, p. 12. Incorporated. Oklahoma. Bitter Creek Oil and Gas Company of Blackwell. Capital stock, \$5000. Incorporators, J. C. Blackaby, Dave Schonwald, C. Behm, and others.

Standard Oil Company of Oklahoma City, capital \$1,250,000. Incorporators, E. J. Rockefeller and L. E. Patterson of Oklahoma City, H. H. Rogers of Wewoka, I.T., and George Silsby of Saginaw, Mich.

Vol. 6, No. 14, Dec. 19, 1907, p. 9. Wildcat Notes. Newspaper dispatches quote a traveling man at Dallas as saying that a well had been brought in at Bells, Grayson County, Tex., fourteen miles east of Sherman and about the same distance southeast of Denison. The report lacks confirmation. Several rigs are at work in Grayson County and Fannin County, adjoining Grayson on the east. Many thousands of acres of leases have been taken in this part of the state, just south of Red River, since the development began in the Choctaw Nation, directly north of Grayson and Fannin Counties.

p. 9. Incorporated. Oklahoma. Clark Oil Company of Guthrie, capital stock, \$600,000. Incorporators, James E. Manter, Clarence E. Eaton, and Charles D. Fullerton, all of Portland, Maine, and James Hepburne of Guthrie, state agent.

Central Oklahoma Oil and Gas Company of Oklahoma City. Capital stock, \$100,000. Incorporators, E. A. Matthews, V. L. Bath, E. J. Streeter, and others.

The Referee Oil Company of Tulsa. Capital stock, \$100,000. Directors W. R. Perry of Tulsa, and J. R. Pratt and H. B. Martin of Muskogee.

p. 12. An Oil and Gas Development Proposition. I will give 1,000 acres of leases of late date on tenth royalty, with gas wells at \$50 per year, as inducements to sink one or two test wells. You may drill any place you desire on your own leases too. I am simply after getting experienced oil men to test for oil, gas, and liquid asphaltum. No wells have been drilled in this district except shallow wells for water, which vary from 200 to 300 feet in depth. It is in this water and sand that the asphaltum and some oil is found. It is in abundance and is under most every acre of my leases. Some sulphur and salt water here also.

I have often been through the Texas oil fields, and after carefully observing the indications there, returned here and searched diligently and have picked this location as the best. This deposit is wonderful, and I think you will agree with me if you will come and investigate.

The 1,000 acres of leases are worth more than 10,000 acres in most unproven territory.

Asphaltum, as you know, is the residue of oil, and is found here under my leases just the same as in the Sour Lake, Texas, oil field, which field produced several million barrels of oil, and is today producing. Gas and oil have been found a short distance from here, but, as stated above, no drilling has been done.

My proposition is right on a prominent railroad, making everything convenient. Come; can show you fully in one day. Hope has 5,000 inhabitants, and four lines of railway now in operation.

Address. A. P. Dyke, dealer in Oil, Gas, Farm, and Fruit Lands. Hope, Ark.

Vol. 6, No. 15, Jan. 5, 1908, p. 4. Ardmore now has natural gas. A few days before Christmas, gas was turned into the pipe line extending from the Santa Fe Company's wells at Wheeler to the city of Ardmore, Okla., eighteen miles east of the development. Both oil and gas have been obtained in the Wheeler Field. Ardmore is one of the most flourishing cities in southwestern Oklahoma, and the cheap fuel now being supplied to its industries by the pipe line from Wheeler will undoubtedly accelerate its growth and prosperity.

p. 14. Incorporated. Oklahoma. Slater Oil Company of Muskogee, incorporated with \$100,000 capital stock, by Hal Belford and Fred A. Lain, both of Muskogee, and E. R. Perry, Tulsa, Okla.

Osage Fifty-Eight Oil Company, incorporated with \$500,000 capital stock, by A. R. Field, E. S. Lovett, Frank C. Hill, Donald Barker, all of Los Angeles, Cal., and others.

Randolph Oil Company of Tulsa, incorporated with \$100,000 capital stock, by J. S. Moffett, Rush N. Wallace, and S. B. Seay.

Granton Oil Company of Tulsa, incorporated with \$100,000 capital stock, by E. R. Perry of Tulsa, J. R. Pratt and Sid O'Donnell, both of Muskogee, Okla.

Vol. 6, No. 16, Jan. 19, 1908, p. 3. Incorporated. Geyser Oil Company of Muskogee, incorporated with \$5,000 capital by Charles W. Bliss, Franklin Garland, and A. A. Kinney.

Atlas Oil Company of Muskogee, incorporated with \$5,000 capital by Franklin Garland, A. A. Kinney, and Charles W. Bliss.

Sunset Oil Company of Haskell, incorporated with \$10,000 capital by Ernest K. Moss of Haskell, Theodore Dawson and S. W. Marr, both of Tulsa, Okla.

p. 5. Fifteen Wells Completed at Wheeler in 1907. Fifteen wells were completed in 1907 by the Santa Fe Company at Wheeler, 18 miles west of Ardmore, Okla., a rapidly growing city on the Gulf, Colorado & Santa Fe Railway, a few miles north of the Texas line. Seven of the completions were oil, three both gas and oil, two gas only, and three dry. A pipe line was laid from Wheeler to Ardmore in the Fall, and since December 20, Ardmore has had a supply of natural gas from the Santa Fe Company's wells. As yet no facilities have been provided for marketing the oil production at Wheeler, and as a result the oil wells have been shut in after their capacity has been tested. On December 31, 1907 there was in storage in the field

about 8,000 barrels of crude. The gravity of the oil is 21.5 degrees Baume. The development at Wheeler has been conducted from the start by the Santa Fe, under the supervision of H. B. Goodrich, manager of the company's fuel oil properties. Drilling has extended over a period of about three years. Prior to January 1, 1907, there had been drilled in the district 11 wells. Of these, two were abandoned before determining depth had been reached; 3 were producers of oil; 3 produced both oil and gas; 1 was a water supply well; and 2 were dry. On January 1, 1907, 2 wells were drilling, and on January 1, 1908, 2 were drilling. Information as to the capacity of the wells is lacking, but it is reported that one or more showed for 75 to 100 barrels. Following is the table of well operations in the Wheeler district:

	Completed	Oil	Oil and Gas	Gas	Dry	New	Production	Average
1907	15	7	3	2	3		*300	*30
1906	<u>8</u>	<u>3</u>	3	<u>0</u>	<u>2</u>		*180	*20
Difference	7	4		2	1		120	

* - barrels estimated

p. 5. Mid-Continent Well Statistics, 1907. Wells completed in Chickasaw Nation, Choctaw Nation, and Arkansas in 1907. (production in barrels per day).

	Completions	Production	Dry	Gas
January	4	50	1	--
February	3	--	3	--
March	7	100	--	4
April	5	20	1	2
May	2	--	1	1
June	1	--	1	--
July	2	--	2	--
August	4	15	1	1
September	5	80	1	1
October	4	15	1	2
November	5	225	1	2
December	<u>5</u>	<u>--</u>	<u>5</u>	<u>--</u>
Total 1907	47	500	18	13
Total 1906	<u>30</u>	<u>200</u>	<u>10</u>	<u>20</u>
Difference	17	300	8	7

Total number of wells drilled in Chickasaw Nation, Choctaw Nation, and Arkansas, 117. Dry 38. Gassers 63. - Oil City Derrick.

Vol 6, No. 17, Feb 5, 1908, p. 12. Incorporated. Oklahoma. Big Fred Oil Company of Claremore. Incorporated with \$10,000 capital stock, by George F. and Wells Wyvell and S. M. Flanagan.

Elk Oil Company of Bartlesville, incorporated with \$25,000 capital stock, by D. G. Maxwell, G. F. Bartlett, and A. L. Jack.

Lyle Oil and Gas Company of Muskogee, incorporated with \$10,000 capital stock, by W. M. Irwin, and others.

New State Oil and Gas Company of Glenn Pool, incorporated with \$500,000 capital stock, by Alvin Freeman, Coweta, Okla.; Charles Crosby, Haskell, Okla., and others.

Gerard Oil Company of Muskogee, incorporated with \$25,000 capital stock, by W. Ward Cornelius, Mal Belford, and Fred A. Lain.

Manitou Oil Company of Muskogee, incorporated with \$10,000 capital stock, by Garfield Johnson, N. O. Butts, and Sadie Farson.

Vernon Oil Company of Tulsa, incorporated with \$200,000 capital stock, by C. P. Smith, D. L. Green, John Ray, and others.

Tulip Oil Company, incorporated with \$25,000 capital stock, by J. A. Wettick, Wm. L. Moore, H. C. Chenev, and J. W. Glass.

Oklahoma Petroleum Company of Tulsa, incorporated with \$10,000,000 capital stock by William Morgan Robbins, John Montague Havner, and John Henry Rogers.

Vol. 6, No. 18, Feb. 19, 1908, p. 7. Incorporations. Oklahoma. Dixie Oil Company of Oklahoma City, incorporated with \$1,000,000 capital stock, by John W. Crego and J. A. Oakump, both of Kansas City, Mo., and E. L. McGeown of Guthrie, Okla.

Checote Oil and Gas Company of Okmulgee, incorporated with \$125,000 capital stock by E. R. Hayes, R. D. Carpenter, T. F. Randolph, and W. R. Alexander.

Florence Oil and Gas Company of Okmulgee, incorporated with \$10,000 capital stock by R. C. Winslow, Alex Pusten, and W. G. Newman.

Mary Virginia Oil Company of Tulsa, incorporated with \$10,000 capital stock, by Wallace Kempbell, C. Pace, and W. A. Stuart.

Kiefer Oil and Gas Company of Tulsa, incorporated with \$500,000 capital stock, by T. K. Hunt, T. C. Conroy, and G. W. Updegraff.

Canadian Oil and Gas Company of El Reno, incorporated with \$1,000,000 capital stock, by Fay Ragland, Joe Bashore, W. G. Williams, and L. B. Pennell.

Lone Star Oil Company of Muskogee, incorporated with \$10,000 capital stock, by William D. Ford, Robert Jordan, and M. Jordan.

F. I. Green Oil and Gas Company of Enid, capital stock \$1,000,000. F. I. Green, B. T. Thompson, A. W. and W. A. McQuillin, incorporators.

The Minshall Oil and Gas Company, a West Virginia corporation, has been granted a permit to do business in Oklahoma. Capital \$50,000. Oklahoma agent, L. R. Lewis of Tulsa.

The Indianokla Oil and Gas Company of Marietta, Ohio, capital stock \$50,000, has been granted a permit to do business in Oklahoma. Oklahoma agent, James M. Givens of Muskogee.

Iowa Petroleum Company of Tulsa, incorporated with \$500,000 capital stock, by J. H. Rogers, W. M. Robbins, and L. D. Ladd.

Missouri. Sparta Oil Company of Sparta, incorporated with \$100,000 capital stock, to develop oil and gas, by Alexander C. Taggart, James W. Skelly, and Robert H. Bosborough.

Vol. 6, No. 19, March 5, 1908, p. 1-2. A Fine Demonstration. Tulsa, Okla., March 1. The first annual meeting of the Mid-Continent Oil & Gas Producers Association at Tulsa on Saturday, February 29, was a success from every standpoint. Fully 500 oil operators came together, representing about 50,000 acres of proven oil territory, an investment of nearly \$100,000,000, and an industry that gives employment to 45,000 men. It is said by veterans in the business to have been the biggest meeting of oil men that ever took place in the history of the country... Later in the afternoon, the board of directors met at the Robinson Hotel, and elected the following officers: N. V. V. Franchot, President. W. H. Johnson, Vice-president. Victor Martin, Secretary. H. F. Sinclair, Treasurer. John R. Reavis

p. 2. Dr. David T. Day and assistant John P. Dunlop, experts in oil, of the division of mineral resources of the United States Geological Survey, are about to visit the oil fields of the Southwest, including Louisiana, Texas, and Oklahoma. Mr. Dunlop will devote his time to obtaining oil samples from the Oklahoma wells, and these will be forwarded to the Geological Survey for analysis.

p. 4. Muskogee personals. A. P. McBride, one of the pioneer oil men of the Kansas and Territory oil fields, and who is also president of the Wichita Natural Gas Company, spent a couple of days in Muskogee the first of the week.

p. 5. Notes. C. A. Richardson of the Richardson-Gay Refinery at Corsicana, Texas, has arrived in Tulsa with his household goods, and will immediately commence the erection of the refinery which he is to build at Sapulpa.

The new offices of the Prairie Oil and Gas Company are to be on the second floor of the Central National Bank Building, and will occupy the entire south front.

Vol. 6, No. 20, March 19, 1908, p. 12. Wildcat Notes. It is reported from Texarkana that the Clifford Well Company has closed a contract for a 2,000-foot well, 24 miles south of Arkadelphia, on the Ouachita River, for the Grayson-McLeod Lumber Company of St. Louis. Three wells are reported to have been drilled there

with standard tools, but did not reach a determining depth. A good showing of gas and oil was found at 600 and 1,200 feet. A rotary will be used in the new well, due to the caving material.

p. 12. Incorporated. Oklahoma. Swastika Oil Company of Tulsa, capital \$10,000, incorporated by E. T. Tucker, Charles W. Grimes, O. K. Eysenback.

Bixby Oil and Gas Company of Bixby, \$50,000 capital. Incorporators, S. L. Inglert, J. A. Severns, and H. Best.

Alpha Oil Company of Tulsa, \$10,000 capital. Incorporators, Billie Wanner, J. M. Ward, and W. W. Cornelius.

Indicute Oil Company of Tulsa, \$30,000 capital. Incorporators, James Timothy, and A. E. Cremin.

Union Oil and Gas Company of Oklahoma City, incorporated with \$20,000 capital stock, by O. A. Lambert, Harry Ross, and S. S. Arming.

Vinita, Big Cabin Development Company of Vinita, incorporated with \$50,000 capital stock, by W. F. Morgan, E. E. Yates, David Joseph, and others.

Ruby Oil Company of Muskogee, incorporated with \$50,000 capital stock, by L. B. Elyea, G. W. Grove, and F. W. Marlowe.

Commercial Oil Company of Muskogee, incorporated with \$5,000 capital stock, by M. R. Williams, A. A. Kinney, A. A. Dacison, and Emerson Priddy.

The Wain Natural Gas Company of Owen Station, has been chartered, with \$25,000 capital. Incorporators, Charles Owen, Dan Guernsey, and G. Walter Connelly, all of Caney.

Gale Oil Company of Muskogee, incorporated with capital stock of \$50,000, by L. B. Belgee, W. D. Ford, and Robert Jordan.

Wilse Oil Company of Okmulgee, incorporated with capital stock of \$10,000, by C. M. Witter, W. N. Corey, and D. A. Wooley.

West Virginia. The Red River Oil and Gas Company has been incorporated with \$100,000 capital at Wheeling, West Virginia, to develop oil and gas lands in Grayson, Cooke, and Fannin Counties, Texas. As announced in the application for charter which was granted, the objects of the same is to develop oil and gas in certain North Texas lands already acquired and to be hereafter acquired. The officers are as follows: President, C. Ferguson of Hallidays Cove, W. Va., already largely interested in oil and gas and coal as well as electric railways. Vice-President, W. W. Hoyt, of Wellsburg, W. Va., prominent eastern realty dealer, with an office in New York City. Secretary and treasurer, B. D. Tillinghast, of McDonald, Pa., manager of extensive machine shop interests. Four directors were named, as follows: C. Ferguson, W. H. Hoyt, Jasper Smith of New Cumberland, W. Va., and Howard Smith, of Toronto, Ohio. The latter are two extensive tile and brick manufacturers, as well as being interested in gas, oil, and coal. The fifth place in the directorate is kept open for a Texas member, should local interests demand it.

Vol. 6, No. 21, April 5, 1908, p. 7. Wildcat Notes. A test well is to be drilled for oil by Pennsylvania parties near Gainesville, Texas.

p. 7. Incorporated. Oklahoma. Long Shot Oil Company of Nowata, \$25,000 capital stock. Incorporators, A. Campbell of Tulsa, J. L. McMahan, and George Derringer, of Nowata.

Red River Oil and Gas Company of Madill, \$20,000 capital stock, Incorporators, A. B. Beard, L. F. Beard, W. S. Arrington, T. A. Goodwin, and J. L. Henshaw.

Vol. 6, No. 22, April 19, 1908, p. 3. Notes. A dispatch to the Dallas News from Durant, Okla., on April 12, tells of the striking of gas in a well on the J. T. Potts farm, two miles west of Colbert, at a depth of 82 feet.

The Oklahoma City Gas & Electric Company has announced that it will lay 50 miles of additional gas mains this year, and will make other improvements involving an outlay of \$250,000.

Things are dull in the Western Oklahoma districts. At Wheeler, the Santa Fe has shut down, and there seems little prospect of an immediate resumption of work. At Gotebo, in Kiowa County, only one well is drilling.

p. 7. Wildcat Notes. The Red River Oil and Gas Company, composed of West Virginia and Pennsylvania people, has leased 270 acres of land near Sherman, Texas, and will start several tests, one seven miles west of Sherman, in Grayson County, one in Cooke, and one in Fannin County. Three cars of machinery arrived at Sherman on April 9. Paul Mahoney of Sherman represents the company.

p. 17. Incorporations. Oklahoma. Rutherford Oil and Gas Company of Claremore, \$20,000 capital stock. Incorporators, Charlie Brown, Nowata, Okla.; H. H. Medler, Muskogee, Okla.; William Poison, Coffeyville, Kansas.

Eldorado Developing Company of Eldorado, \$25,000 capital stock. Incorporators, R. N. Sharp, H. Beyless, and U. E. Oliver.

Winchester Oil Company of Nowata, \$40,000 capital stock. Incorporators, W. L. Moore, W. W. Wright, and Guy L. Watts.

Bond Oil Company of Nowata, \$40,000 capital stock. Incorporators, J. B. Pollard, W. ?, and Guy L. White.

Sterling Oil and Coal Company of Tulsa, Incorporators, J. V. Tackaberry, and others.

?Rancha Oil Company of Tulsa, \$100,000 capital stock. Incorporators, D. C. Acosta, John R. ?Dewey, and R. P. Elliott.

Biddle Oil Company of Tulsa, \$10,000 capital stock. Incorporators, C. E. Suppes, James Cremin, C. M. Armstrong, and T. O. Cremin.

Galena Oil Company of Tulsa, \$20,000 capital stock. Incorporators, B. F. Rice, T. D. ?, and T. Mangusan.

Woodley Oil & Gas Company of Vinita, \$25,000 capital stock, Incorporators, E. N. Ratcliff, Charles A. Dodson, W. R. Atwood, and others.

Kinta Oil and Gas Company, of Kinta, \$10,000 capital stock. Incorporators, R. B. Cassidy, S. S. Blitz, J. C. Fenton, and others, all of Louisville, Kentucky.

Bryan Oil Company of Muskogee, \$1,000 capital stock. Incorporators, Irwin Donavan, George C. Butte, James M. Anthis, and others.

Utica Oil Company of Muskogee, \$10,000 capital stock. Incorporators, A. B. Morrison, A. T. Wiesner, H. C. Krouse, and others.

Emery Oil Company of Muskogee, \$10,000 capital stock. Incorporators, A. T. Wiesner, E. B. Morrison, H. C. Krouse, and others.

Douglas Oil Company of Muskogee, \$10,000 capital stock. Incorporators, C. E. Douglas, F. E. Storm, and W. C. Newman.

Sater Oil & Gas Company of Okmulgee, \$25,000 capital stock. Incorporators, A. A. Lambert of Okmulgee; Harry Ross and Andrew Denton, Independence, Kansas.

Federal Gas and Oil Company of Okmulgee, \$10,000 capital stock. Incorporators, E. E. Andrews, D. A. Skillen, W. S. Roll, and others.

Ellen Oil Company of Okmulgee, \$10,000 capital stock. Incorporators, W. S. Turman, Bessie Turman, and J. J. Davner.

Rosser Oil Company of Tulsa, \$100,000 capital stock. Incorporators, B. F. Rice, T. D. Lyons, and T. Manguson.

Okeene Oil Company of Muskogee, \$30,000 capital stock. Incorporators, Ira A. Reeves, E. W. Watts, and E. H. Kingkendal.

Caton Oil Company of Okmulgee, \$100,000 capital stock. Incorporators, Lee Bean, L. Caton, H. E. Webb, and F. R. Caton.

Vol. 6, No. 23, May 5, 1908, p. 13. Incorporated. Oklahoma. Rex Oil and Gas Company of Sapulpa, capital stock \$10,000. Incorporators, P. J. Lenhard, Henry McGraw, and Elmer L. Neff.

Baughman Oil and Gas Company of Checotah, capital stock \$50,000. Incorporators, Bert Baughman, N. G. Turk, R. O. Smith, and T. M. Price.

Wilkins Oil Company of Tulsa, with \$10,000 capital stock. Directors are, N. B. Snyder of Pittsburgh, Pa., and J. A. Hill and A. J. Brown of Tulsa.

Soho Oil Company of Tulsa, with \$10,000 capital stock. The directors are: N. B. Snyder of Pittsburgh, Pa., and J. A. Hill and A. J. Brown of Tulsa.

Kellyville Oil Company of Tulsa, with \$10,000 capital stock. The directors are P. J. Lenhard, W. F. Collins, and E. L. Neff, all of Sapulpa.

Great Eastern Oil & Gas Company, of Claremore, with \$10,000 capital stock. The directors are: J. G. Rucker, J. Parrett, and C. F. Adams, all of Claremore.

Tiayah Oil Company of Claremore, \$25,000 capital stock. Incorporators, G. W. Walkley and L. T. Mitchell, both of Claremore, and C. C. Stebbins, of Tulsa, Oklahoma.

Emerald Mining Company of Claremore, \$25,000 capital stock. Incorporators, John Barrett, E. Chambers, and A. A. Dennison.

Justin Oil Company of Tulsa, \$10,000 capital stock. Incorporators, F. M. Rudolf, D. L. Swift, and R. W. Kellough.

Almary Oil Company of Tulsa, \$100,000 capital stock. Incorporators, W. W. Cornelius, C. W. Gormley, and Roger S. Sherman.

Tithing Oil Company of Tulsa, \$15,000 capital stock. Incorporators, E. M. Gormley, Roger S. Sherman, and W. W. Cornelius.

Springs Oil Company of Tulsa, \$100,000 capital stock. Incorporators, F. L. Thompson, Warren G. Guiss, and others.

Moscow Oil Company of Tulsa, \$100,000 capital stock. Incorporators, W. F. Farley, W. G. Guiss, and T. D. Lyons.

Union Natural Gas Company of Muskogee; \$100,000 capital stock. Incorporators, George C. Butte, Garfield Johnson, and Sadie Fortson.

Midway Oil & Gas Company of Muskogee, \$32,000 capital stock. Incorporators, Harry R. Denton, Muskogee, William B. Dillman and W. W. Lantz, both of Independence, Kansas.

Minnie Oil Company of Nowata, \$25,000 capital stock. Incorporators, Charles Brown, J. L. McMahan, both of Nowata, and W. M. Poison, Coffeyville, Kansas.

Cordell Oil and Gas Company of Okmulgee, \$30,000 capital stock. Incorporators, E. E. Andrews of Okmulgee, J. W. Stanford and George H. O'Hara, both of Independence, Kansas.

Chickasaw Oil, Gas & Development Company of Purcell, \$50,000 capital stock. Incorporators, T. F. Green, president; T. O. Head, vice-president; C. T. Rice, secretary; W. H. Tomlin, treasurer.

Bailey Oil Company of Nowata, \$10,000 capital stock. Incorporators, Fred and Grant Bailey and J. B. Pollard.

Vol. 6, No. 24, May 19, 1908, p. 14. Death of James Wilson Lee. Former State Senator J. W. Lee, for many years a prominent figure in politics and the oil industry in Pennsylvania, and law partner of S. C. T. Dodd, until Mr. Dodd went to New York in 1881 to become general solicitor for the Standard Oil Company, died from heart failure at his home in Pittsburgh, Pa., on May 11. Mr. Lee was the leader of the independent Republicans in Pennsylvania for years, and was actively identified with the Producers' Protective Association, out of which grew the Producers' Oil Company, then the Producers and Refiners' Oil Company and the United States Pipe Line Company, and later the Pure Oil Company, of which he was general solicitor, director, and trustee at the time of his death. He was 62 years old.

Vol. 7, No. 1, June 5, 1908, p. 12. Incorporated. Texas. Kerwin Drilling Company of Petrolia, capital stock \$2,100. Incorporators, K. N. Hapgood, R. H. Palmer, W. J. Kerwin, and William Wantland.

Oklahoma. Lake Oil & Gas Company of Vinita, incorporated with \$25,000 capital stock by Lemuel W. Marks and Eliza L. Orr of Vinita, and E. L. Orr of Chelsea, Oklahoma.

Mack Oil and Gas Company of Sapulpa, \$6,000 capital stock. Directors, H. McFann, F. W. Turner, F. E. Adams, and W. D. Richardson, all of Sapulpa.

Merry Widow Oil Company of Sapulpa, \$4,000 capital stock. Directors, H. S. Lyttle, W. D. Richardson, Virgil Hicks, B. C. Burnett, H. M. McFann, all of Sapulpa.

Vol. 7, No. 2, June 19, 1908, p. 10-11. Incorporated. Texas. Chickasaw Oil Company of Austin, capital stock \$10,000. Purpose, to mine for oil and other minerals in Oklahoma. Incorporators, R. M. Thomson, Charles Anderson, and H. A. Thomson.

Oklahoma. Fisher Oil Company of Bartlesville, incorporated with \$12,000 capital stock, by J. H. Markham, Jr., and A. F. McCaleb, Bartlesville, and C. M. Ball, Coffeyville, Kansas.

Advance Oil Company of Muskogee, incorporated with \$10,000 capital stock, by Harry R. Denton, Muskogee, H. G. James and Alex. Calvert, Independence, Kansas.

Rowe Oil & Gas Company of Nowata, incorporated with \$25,000 capital stock, by Fred S. Rowe, H. W. Reed, William Copp, and others.

M. R. L. Oil Company of Okmulgee, incorporated with \$20,000 capital stock, by J. H. Bradley and J. B. Ley, Okmulgee, and A. P. McBride, Independence, Kansas.

Pine Creek Oil Company of Okmulgee, incorporated with \$20,000 capital stock, by R. C. Winslow, John H. Rebold, and W. C. Newman.

Zzell Oil & Gas Company of Sapulpa, incorporated by Louis Schmidt, Louisa K. Schmidt, O. M. Ireland, and Daisy D. Ireland.

Lorraine Oil and Gas Company of Sapulpa, incorporated with \$10,000 capital stock, by L. A. Smith, E. L. Neff, S. J. Smith, and others.

Mack Oil Company of Sapulpa, incorporated with \$6,000 capital stock, by H. M. McFann, F. W. Turner, F. E. Adams, and others.

Jolie Oil Company of Tulsa, incorporated with \$15,000 capital stock, by E. F. Blaise, G. G. Gray, and M. G. Fazel.

Logan Oil Company of Tulsa, incorporated with \$10,000 capital stock, by J. A. Friend, F. M. Rudolf, R. W. Kellough, and others.

Veda Oil Company of Okmulgee, \$5,000. R. C. Winslow, J. O. Hamilton, C. R. Forbes.

Trenton Oil Company of Muskogee, incorporated by J. S. Givens, B. T. Thomas, and P. B. Maccoughtry.

Topeka Oil Company of Muskogee, incorporated with \$25,000 capital stock, by J. S. Givens, B. T. Thomas, and P. B. Macoughtry.

Miscellaneous. Columbia Gas and Electric Company of Huntington, West Virginia, is now constructing its proposed pipe line. This extends easterly from Cincinnati, Ohio, to company's natural gas fields in West Virginia, main line being about 160 miles long, with branch lines aggregating about 25 miles. Main line is 18 to 20 inches in diameter, and will supply Cincinnati and vicinity with natural gas. Contracts for materials and labor have been awarded. John A. Lambing, general superintendent, Huntington, is manager in charge of construction. A. S. White, 38 Wall Street, New York, is president.

Texas, Louisiana, and Arkansas Oil and Pipe Line Company of Nashville, Tenn., incorporated with \$50,000 capital stock, by R. J. Riddle, J. T. Mathis, N. C. Perkins, and others.

p. 14. To make a geological study of Oklahoma oil region. William J. Reed of the United States Geological Survey, who is now in Oklahoma for the purpose of beginning a thorough study of the formations of the oil producing region with especial reference to the occurrence of petroleum and gas, will depend upon the records of wells drilled in the various localities. Later on, another member of the survey's staff of geologists will join him in his investigations. Their work will extend over a period of two years or more, and will be as accurate as it is possible to make it. The result will be a report that will be of much practical value to the oil industry. Operators no doubt will be glad to assist Mr. Reed in getting the information as to well records that is necessary to his work.

p. 14. New trust company at Muskogee. The Oklahoma Trust Company, an Oklahoma corporation with \$300,000 paid-up capital, officered by men identified with the oil business, has opened its doors at Muskogee. John B. Jones, of Wellsville, New York, is president; William E. Roeser, of Tulsa, vice-president; J. A. Paulhamus, Muskogee, secretary, and E. C. Allison, Independence, Kansas, cashier. These, with R. S. Litchfield, of Independence, Thomas H. Owen and James H. Huckleberry, of Muskogee, comprise the board of directors.

Vol. 7, No. 3, July 6, 1908, p. 8-9. Notes. The Caddo Oil & Gas Development Company, and the Durant Oil & Gas Company, have consolidated their holdings for Bryan County, near Caddo, and will hereafter operate as the Bryan County Oil & Gas Company. A test was started by the Caddo Company in section 1, T. 5 S., R. 9 E., and the Durant Company has been drilling in section 26, T. 4 S., R. 9 E. One of these wells will be sunk for a deep test.

p. 14. Incorporated. Oklahoma. Highland Oil Company, Tulsa, capital \$20,000. Incorporators, T. O. Cremin, C. A. Armstrong, and W. F. Tucker.

Oklahoma Fuel Company, Tulsa, capital \$10,000. Incorporators, E. R. Kemp, R. S. Sherman, and W. B. Stone.

R. E. Mooney Pipe Line Company, Tulsa, \$10,000 capital stock. Directors, Edward C. Ryan and Emma C. Ryan of Tulsa, and Robert E. Mooney of Coffeyville, Kansas.

The Lawton Asphalt and Improvement Company, Lawton, capital \$20,000. Directors, James M. Powers, M. A. Nelson, and Horace G. Southard, all of Lawton.

Plater Oil & Gas Company, Sapulpa, capital \$10,000. Incorporators, H. C. Lyford, W. P. Longmire, Charles Plater.

Lincoln Oil Company, Chandler, capital \$10,000. Incorporators, Clyde Crane, L. B. Matheyer, T. J. Hinchey.

Revell Oil Company, Muskogee, incorporated by J. Spangenberg, W. H. Irving, and O. D. Revell.

Allegheny Oil Company, Okmulgee, incorporated with \$10,000 capital stock, by John H. Rebold, William C. Newman, and R. C. Winslow.

Twin Hills Oil & Gas Company of Sapulpa, incorporated with \$50,000 capital stock, by Virgil Hicks, M. H. Sairin, and H. H. McFann.

Miscellaneous. Nichols Oil & Gas Co. of Dockesburg, Arkansas, incorporated with \$10,000 capital stock by A. C. Steel, R. A. Gilliam, W. T. Nichols and others.

Hopewell Gas & Oil Company, Mabelvale, Arkansas, incorporated with \$10,000 capital stock, by J. E. England, Sr., W. M. Kavanaugh, E. D. Matthews, and Edward Cornish.

Vol. 7, No. 4, July 20, 1908, p. 12. Incorporated. Oklahoma. Horse Shoe Oil and Gas Company of Checotah, capital \$6,000. Incorporators, W. J. Henson, J. V. Holt, Ira Marsh, R. D. Martin, R. B. Robinson, A. H. Livingston, Charles Burford, all of Checotah.

Barnett Oil Company of Muskogee, capital \$50,000. Incorporators, W. F. Manlove, Leroy Haskell, and L. B. Elyea.

Tomahawk Oil Company of Muskogee, capital \$50,000. Same incorporators as above.

Mississippi Oil and Gas Company of Gulfport, Miss., capital stock \$20,000. Incorporators, D. C. Acosta, J. L. Taylor, H. W. Albright, H. McCaughan, S. E. Naylor, all of Gulfport; Miss E. L. Clinton of Scranton, Miss. The company names as its Oklahoma agent, R. R. Elliott of Tulsa,

Fraternal Oil Company of Bartlesville, capital stock \$25,000. Incorporators, H. C. and Howard Webber of Bartlesville, M. U., E. H., and James Webber, all of Dewey.

Northern Oil Company of Muskogee, capital stock \$10,000. Incorporators, W. O. Carr, Thomas Leahy, and R. L. Folkemer.

Eufaula Oil and Gas Company of Muskogee, capital stock \$12,000. Incorporators, W. O. Cromwell of Enid, John Posey of Muskogee, and W. E. Temple of Holdenville.

Vol. 7, No. 5, August 6, 1908, p. 4-7. Notes, by John R. Reavis, associate editor.

p. 6-7. The city of Guthrie is now rejoicing in the possession of natural gas. It was turned on Monday evening, July 26, and the event was duly celebrated by the residents. Natural gas from the fields of eastern Oklahoma is now supplied at both Oklahoma City and Guthrie, and arrangements are being made to deliver it to Shawnee.

p. 7. Texas fuel oil for Mexican smelters. Now that the Mexican government has removed the duty on fuel oil, the Greene-Cananea smelters at Cananea will be

fired with oil. The first contract for a quantity approximating 1,000,000 barrels, has been awarded to The Texas Company, and will be shipped from that company's refinery and station at Gates, or West Dallas, via the Texas & Pacific to El Paso and thence into Mexico. It is a long haul, nearly 1,000 miles, and will require a large number of cars. California companies were among the most active bidders for this contract.

p. 19. Incorporated. Oklahoma. Amherst Oil & Gas Company of Nowata, incorporated with \$12,000 capital stock, by Hugh Branson and Frank Hitchens, Nowata, and R. S. Litchfield, Independence, Kansas.

Tulsa Refining Company of Tulsa, incorporated with \$100,000 capital stock, by C. D. Webster, G. H. Seager, W. F. Ewing, and others.

Peerless Oil Company of Tulsa, incorporated with \$10,000 capital stock, by B. B. Calk, E. D. Smith, and H. Roeser.

The X.I.T. Oil Company of Chelsea, capital stock \$8,000. Incorporators, N. B. Dannenburg, Joseph D. Hogue, William H. Clark, R. C. Brewer, C. J. Hill, and G. A. Tibbs.

The Trio Oil & Gas Company of Okmulgee, capital stock \$5,000. Incorporators, I. B. Levy, W. A. Hiatt, and J. Belford.

Neha Oil and Gas Company of Tulsa, incorporated with capital stock of \$10,000, by W. H. Bagley, W. H. Reese, and F. D. Misener.

Vol. 7, No. 6, August 20, 1908, p. 12. Incorporated. Texas. Palmer Oil Company of Henrietta, capital stock \$4,500. Incorporators, W. H. Meyers, K. N. Hapgood, and J. B. Dale.

Oklahoma. Euchee Oil Co. of Muskogee, incorporated with \$5,000 capital stock, by J. T. Mitchell, Thomas W. Leahy, Muskogee, and E. M. Murray, Bartlesville, Oklahoma.

Drillers' Oil Co. of Ochelata, incorporated with \$25,000 capital stock, by Fred P. Spraul, A. F. Hilliard, O. D. Hare, and E. A. Hanna.

Preston-Galligan Oil Co. of Okmulgee, incorporated with \$10,000 capital stock, by Alex Preston, J. O. Hamilton, and William C. Newman.

Trio Oil & Gas Co. of Okmulgee, incorporated with \$5,000 capital stock by I. B. Levy, W. A. Hiatt, and J. Belford.

The Oklahoma Company, incorporated with \$12,000 capital stock, by J. L. Dowling, T. P. Lee, Tulsa; J. S. Cullinan of Houston, Texas, and others.

Delta Oil Co. of Tulsa, incorporated with capital stock of \$10,000, by B. B. Calk, E. D. Smith, and Henry Roeser.

Solon Oil Co. of Tulsa, incorporated with capital stock of \$10,000 by R. W. Kellough, A. F. Robertson, and F. M. Rodolf.

p. 12. It is reported from Brownwood, Texas, that gas has been found in the Malone well at about 150 feet. This is the second test here, the first being lost. On August 12, the Brownwood City Council granted a franchise for natural or manufactured gas to the Ingram Company for thirty years at \$1.00 a thousand, with a \$1.50 maximum. The company expects to start drilling by September 1, to prospect for oil and gas. If gas is not found, the company may furnish the city with manufactured gas.

p. 19. Wild Cat Notes. A water well being drilled on the A. S. Gage pasture near Alpine, Texas, and eight miles from Marathon, encountered gas at about 60 feet, with a showing of oil. The Marathon Oil & Development Company has been prospecting not far from this well.

Two wells are being drilled at Turkey Creek, Texas, near Westfield. One will probably be abandoned and another drilled.

Vol. 7, No. 7, Sept. 6, 1908, p. 13. Incorporated. Texas. Ballard Oil Company of Dallas, capital \$10,000. Incorporators, J. A. Ballard, T. R. Tennant, O. A. Hale, and J. R. Gunter.

Louisiana. Richardson Oil Company of Shreveport, \$70,000 capital. Incorporators, D. C. Richardson, president, J. B. Chapman, vice-president and secretary, D. C. Richardson, Jr., treasurer.

Oklahoma. Cherokee Pipe Line Company of Chelsea, \$30,000 capital stock.

Incorporators, Fred M. Scott, Chelsea; William Copp, Nowata, Oklahoma; W. D. Todd, Warren, Pennsylvania, and others.

Old Glory Coal, Oil, & Gas Company, Claremore, \$50,000 capital.

Incorporators, A. F. Lee, H. Tom Knight, both of Claremore, and Thomas D. Bard, Sr., Chelsea, Oklahoma.

Laura Oil & Gas Company of Holdenville, capital of \$15,000.

Incorporators, H. W. Wilson, H. B. Gooch, and H. C. Rankin.

Plummer Oil & Gas Company of Holdenville, capital of \$5,000.

Incorporators, H. W. Wilson, H. C. Rankin, and H. B. Gooch.

Vol. 7, No. 8, Sept. 20, 1908. p. 12. Incorporated. Texas. Mitchell Oil & Gas Well Co. of Celeste, capital \$10,000. G. N. Norris, president, M. K. Harrell, treasurer, Morris Harrell, secretary.

Ballard Oil Co. of Dallas, capital \$10,000. James A. Ballard, Thomas R. Tennant, and others.

Texarkana Co., Inc., at Texarkana, with Will Barker, president, and Louis Loeb, secretary-treasurer, both of Columbia, Tennessee. A. Maxville, Texarkana, manager, has purchased 200 acres of land near Texarkana and will develop for gas and oil.

Oklahoma. Nowata Oil Co. of Nowata, capital \$10,000 by C. F. Moore, H. L. Foster, and W. D. Humphrey.

p. 12. New Wells at Henrietta. The Clayco Oil & Pipe Line Company drilled into a heavy gas sand in its No. 3 on the Panhandle Tract in the Henrietta Field on September 16. The well is said to be about 1,600 feet deep, and is rated a 10,000,000-foot gasser. A report from Henrietta also states that the Navarro Refining Company has completed its No. 1 on the Perkins Land, adjoining the Lochridge Tract, and about 200 feet south of the wells on that land. The new well is said to be good for 100 barrels from the 760-foot sand.

p. 12. The Frisco is preparing to oil its roadbed between Beaumont and Houston, and proposes to use oil also for fuel on its passenger locomotives over the same route.

Vol. 7, No. 10, Oct. 20, 1908, p. 14-15. Incorporated. Oklahoma. Half Moon Oil Co., of Dewey, incorporated with \$25,000 capital stock, by W. A. Letson, F. B. Woodward, and A. S. Gentry.

Pittsburg Gas Co., of McAlester, incorporated with \$100,000 capital stock, by Fred C. Russell, W. G. Weimer, and others, to supply McAlester with natural gas.

Pickett Oil Co. of Nowata, incorporated with \$10,000 capital stock, by E. B. Lawson, P. S. Powell, and others.

Julian Oil Co. of Bartlesville, incorporated with \$5,000 capital stock, by C. C. Julian, C. A. Lamb, and D. B. Mason.

McPherson Oil Co. of Muskogee, incorporated with \$15,000 capital stock, by S. N. McPherson, G. I. Uhi, C. W. Turner, and Charles Bagg.

Cherokee Pipe Line Co. of Guthrie, incorporated by W. D. Dodd, Warren, Pennsylvania, William Copp, Nowata, Oklahoma, W. F. Hammett, Tulsa, Oklahoma, and others. Reported this company will gather crude oil in Chelsea District for Texas City Refining Co., Texas City, Texas.

Shantz-Crabtree Oil & Gas Co., of Muskogee, incorporated with \$3,000 capital stock, by N. M. Shantz, H. C. Shantz, and W. F. Crabtree.

New Western Oil & Gas Co., of Muskogee, Oklahoma, incorporated with \$50,000 capital stock, by J. E. Sweat, W. W. Clair, and W. C. Uphoff.

Thirteen Oil Company of Sapulpa, incorporated with \$10,000 capital stock, by R. B. Dingman, J. O. Denton, and J. B. Stout.

Vol. 7, No. 11, Nov. 6, 1908, p. 5-7. Notes. p. 5. R. M. McFarlin, H. B. Gooch, and J. A. Chapman of the Holdenville Oil Company, are drilling a test a few miles east of Holdenville. Holdenville is their home, and they have long believed they could develop oil in its vicinity. Operating as the Holdenville Oil Company in the Glenn Field, they have made money, and are going to spend a little of it near home.

p. 17. Incorporated. Oklahoma. F. H. McReynolds Oil & Gas Co. of Tulsa, incorporated with \$10,000 capital stock, by R. E. Mackham, R. S. Sherman, both of Tulsa, and F. H. McReynolds, St. Louis, Mo.

New Oklahoma Oil Company of Muskogee, incorporated with \$10,000 capital stock, by E. R. McFarline, William Uphoff, and W. W. Clair.

Lava Oil & Gas Company of Sapulpa, incorporated with \$12,000 capital stock, by F. W. Turner, S. P. Smith, Ira Perkins, and others.

Roberts Oil Company of Tulsa, incorporated with \$5,000 capital stock, by Seth Ely, J. E. Tomlinson, and B. F. Rice.

Progressive Oil Co. of Tulsa, incorporated with \$35,000 capital stock, by S. S. Babcock, F. J. Towar, and A. Campbell.

Taft Oil Co. of Tulsa, incorporated with \$50,000 capital stock, by Charles Page, E. Magnuson, and C. E. Roth.

Paova Petroleum Co. of Tulsa, incorporated with \$10,000 capital stock, by John Eaton, Louis Sands, and E. M. Riese.

p. 17. A Gas Proposition. A splendid business proposition is offered to parties interested in furnishing gas to towns. All our business men are behind this movement. J. H. Whyte, Secretary, Room 1202, Chamber of Commerce, Astoria, Oregon.

Vol. 7, No. 12, Nov. 20, 1908, p. 17. Incorporated. Texas. Dallas Gas & Oil Co. of Dallas incorporated with \$25,000 capital stock, by R. E. Dodson, John C. Haupt, John Davis, and others.

Oklahoma. Zorner Oil Co. of Bartlesville, incorporated with \$25,000 capital stock, by John Shartzler, A. H. Pettigrove, and J. T. Shipman.

Palacine Oil Co. of Shawnee, incorporated with \$8,000 capital stock by F. E. Hackethorn, F. M. Arnold, and Mary M. Arnold.

Campbell Oil Co. of Tulsa, incorporated with \$10,000 capital stock by A. Campbell, X. Wittmer, and H. Wittmer.

p. 17. A gas main at Ravenna, Arkansas, near the corner of Arkansas, Louisiana, and Texas, on the main gas line of the Caddo Oil and Gas Company between the Caddo Field and Texarkana, developed a leak on November 14, caught fire, and before it could be extinguished, burned the Kansas City Southern Depot and several business buildings, and caused other serious damage.

Vol. 7, No. 13, Dec. 6, 1908, p. 7-9. Notes. p. 7. The people connected with the Mississippi Oil & Gas Company, which has drilled a number of gas wells in the vicinity of Taneha, have been doing some wildcatting in the vicinity of Featherstone in the Choctaw country, about fourteen miles from McAlester. They obtained leases on several thousand acres of land and have been drilling a well at a point five miles south of Featherstone. On November 26, when at a depth of 1,400 feet, they struck a strong flow of gas, and at the same time lost their tools. The gas is estimated at a quarter of a million feet. The strike has caused much excitement in that part of the country.

p. 16. Incorporated. Texas. Texarkana Oil Co. of Texarkana, incorporated by M. D. Tilson, J. E. Blackburn, W. P. Hudgins, and others.

Oklahoma. Kay County Oil, Gas & Mining Co., of Peckham, incorporated with \$10,000 capital stock, by J. R. Whiteside, W. C. Larrabee, both of Peckham, and J. E. Doop, Blackwell, Oklahoma.

Melrose Oil & Gas Co., of Muskogee, incorporated with \$10,000 capital stock, by W. L. Tull, F. Garland, and J. P. Jones.

Starburmor Oil Co. of Okmulgee, incorporated with \$25,000 capital stock, by J. E. Burke, L. C. Morton, and F. E. Storm.

Westport Oil Co. of Muskogee, incorporated with \$6,000 capital stock, by L. I. Greer, M. G. Young, and T. F. King.

p. 16. Crosbie now a bank president. Tulsa, Okla. December 3. J. E. Crosbie has been unanimously elected president of the Central National Bank of Tulsa, to succeed J. G. McGannon who died suddenly last week.

John R. Reavis

p. 17. Wildcat Notes. A. P. Dyke will drill a test well on his land near Powers, in the southwestern part of Arkansas.

A gas blowout is reported in the test being drilled by the Texarkana Oil Company, a few miles north of Texarkana. Among those identified with the Texarkana Company are M. D. Tilson, J. E. Blackburn, W. P. Hudgins, J. E. Morris, and A. J. Offenhauser.

p. 17. Rumor of plan to pipe Louisiana gas to St. Louis. It is reported, without confirmation, that prominent financial interests in St. Louis, headed by August Busch, have acquired 1,040 acres of gas territory near Dixie, La., north of Shreveport and east of Oil City and Caddo. A special dispatch from Shreveport to the Globe-Democrat under date of November 30 says that the ultimate purpose of the St. Louis people, is to lay a 30-inch gas line to St. Louis, and that the Laclede Gaslight Company of that city is behind the deal. Several applications for natural gas franchises are now pending in the municipal assembly of St. Louis. T. N. Barnsdall proposes to supply the city from Oklahoma and Kansas. Other parties say they can furnish gas from the Illinois fields. The distance from the Louisiana gas field to St. Louis on an air line is about 500 miles.

p. 17. Roswell H. Johnson, M. S., Consulting Geologist. Telephone 555. Specialty, Mid-Continent Oil and Gas. 56 Masonic Building, Bartlesville, Oklahoma.

Vol. 7, No. 14, Dec. 20, 1908, p. 8-9. Notes. G. W. Yerrin, an oil producer of Robinson, Ill., has arrived here, and will drill a test at Porum, a town thirty miles south of Muskogee on the Midland Valley Railroad. Mr. Yerrin is associated with F. R. and O. T. Letcher, who are largely interested at Porum, and who are operating in the Glenn Field as the New York Oil Company, and in the north extension of the Glenn as the Orient Oil Company.

The owners of the Alpine Oil Company which has struck it so rich in the Flat Rock District just north of Tulsa, are H. S. Sinclair of Independence, Kansas, and Pat and Tom White of the Oil Well Supply Company of this place. Mr. Sinclair owns a half interest, and the White Brothers, the other half. The company has a production of over 3,000 barrels per day, and promises to be a good money maker.

R. M. McFarlin of the Holdenville Oil Company, who is now operating not only in the Glenn Field, but in the Bird Creek and Cherokee Deep Sand Districts, has established offices in the new Culberson Building on South Main Street, Tulsa.

The test well drilled by the Mississippi Oil and Gas Company at Featherstone in the Choctaw country, has 1,200 feet of iron hung up in the hole, and the rig has been skidded for test No. 2. An abundance of gas was developed for fuel purposes.

A. P. Schenberger recently visited the new oil field being opened up near Madill, in Marshall County, Oklahoma, where he obtained a number of leases. Marshall County is southwest of Tulsa, on the Texas line. The latest and best well brought in, is in the northwest quarter of section 25, T. 5 S., R. 5 E., and a mile and a half southeast of Madill. The well was drilled by Gainesville, Texas, and Madill, Oklahoma, people, and got the oil sand at 450 feet. The sand is thirty feet thick and is hard. When Mr. Schenberger left there, the well was making 40 barrels natural of 38 gravity oil. He thought if the well had been shot, it would have been good for 100 barrels. The drilling was done with a rotary. Two small wells had previously been drilled about 500 feet north, and two are now drilling. It is about 100 miles from Madill to Oklahoma City, and a refinery at the latter place is figuring on securing the output of the new well.

S. F. Van Oss of The Hague, Holland, who is to arrive here about December 26, is a director in the Oklahoma Petroleum Compagnie, which is the home or parent organization of the Oklahoma State Oil Company. The capital stock of the Oklahoma Petroleum Compagnie is \$1,400,000. This will be the second visit Mr. Van Oss has made to this country.

There is a movement on foot among the citizens of Tulsa to bring gas from the northern fields into the city for the use of Manufactories. It is estimated the line will cost \$70,000. The gas is to be delivered to manufactories at a low price. Certain business men of Bartlesville have arranged with the Henry Oil Company of Chicago, to perform a similar service for the manufacturers of that place. It is

already having a stimulating effect.

John R. Reavis

p. 11. J. E. Crosbie - practical oil man, successful operator, bank president. J. E. Crosbie, who has just been chosen president of the Central National Bank of Tulsa, Oklahoma, has had a remarkable career. He is a Canadian by birth, of Irish extraction, and learned the oil business from his uncle J. W. Crosbie, now deceased, who was not only a pioneer producer at Petrolia, Canada, but was the first to open the fields of British India thirty-five years ago. Young Crosbie worked with his uncle and learned every detail of drilling and of well operation.

He went with his uncle to India, and also from there to the island of Sumatra, where he laid a pipe line, built a refinery, and carried on very extensive operations. Crosbie and his uncle went from Sumatra back to India, and on the death of the uncle, Crosbie took hold of the business and managed it successfully for three years. He then returned to his home in Canada, and from there went to the Texas oil fields, five or six years ago. He operated successfully at Spindle Top, Humble, and other points, and in the Winter of 1906-1907 came to Tulsa. The big Glenn Pool was just being opened. Crosbie lost no time in getting into the game. He met Capt. C. H. Hammett in the lobby of the Robinson Hotel one evening, and they made a deal in short order, by which he secured 100 acres in sections 8 and 9, known as the Jacob Anderson Lease. It was a mile north of production, and not a well had been drilled upon it. He took a million barrels of oil out of it in eight months. This record was probably never excelled in the Glenn Field. The lease is still producing at the rate of 2,000 barrels a day. He next bought 72 acres in section 5 from Hammett & Gillespie for \$160,000, operated it for nine months, and sold out to the Gulf Pipe Line Company. He then purchased the property of the Lafayette Development Company for \$145,000, and after developing this, sold out again to the Gulf Pipe Line Company. On both these deals, he made large sums. He finally bought the fee of the Crow 40 acres in section 5 for \$65,000, and this he still holds. It pays him \$10,000 a month. On the four properties in the Glenn Field which he has handled, he drilled 89 wells, with not a dry hole, and no well coming in for less than 400 barrels.

Mr. Crosbie is eminently practical in his methods. He knows how to get oil out of the ground. In all the properties he handled in the Glenn Pool, he has surprised other operators by the big production he secured from his wells. This came from early training in all the practical details of the business. But it is not alone in the practical operations that he earned the name for himself. He has been no less successful at the financial end of the business. His foresight and judgment made him a big winner in all his transactions, and in two years he has accumulated a large fortune.

In the Spring of 1908, he was asked to take the presidency of the Oklahoma State Oil Company, whose stockholders live in Holland. It is the only foreign company that owns production in the Glenn Pool. His administration of the affairs of the company has been satisfactory and successful. He has just closed a deal by which the company has taken over the property of the Best Oil Company at \$240,000.

When Mr. Crosbie was chosen for the presidency to the Central National Bank of Tulsa, one of the largest financial institutions in the new state of Oklahoma, everybody said the same thing - that the right man had been found for the place.

John R. Reavis

p. 16. Incorporated. Oklahoma. Leola Oil Co. of Tulsa, incorporated with \$25,000 capital stock, by P. D. McConnell, and T. F. Birmingham.

Wiley Oil and Gas Co. of Bartlesville, incorporated with \$10,000 capital stock by W. C. Van Hoy, C. A. Wiley, and M. R. Richards.

Nowata Pipe Line Co., of Muskogee, incorporated with \$25,000 capital stock, by J. W. Zevely, Muskogee, Clarence E. Eaton, T. L. Croteau, and B. M. Maxwell, all of Portland, Maine, to operate pipe line in Oklahoma field.

Pennsylvania Oil and Development Co., of Muskogee, incorporated with \$10,000 capital stock, by William J. Nelson, John E. Huff, and Cyril D. Nelson.

Iola Oil Co., of Muskogee, incorporated with \$10,000 capital stock by Art Moffitt, L. C. Decius, H. E. Roberts, and others.

p. 18. The Mitchell Oil and Gas Well Company has been organized at Celeste, Texas, twelve miles north of Greenville, to drill for oil and gas on the farm of H. Burrell Mitchell and father, three miles east of Celeste. The capital of the company is \$10,000, and the officers, G. B. Norris, president, Morris Harrell, secretary and attorney; M. K. Harrell, treasurer.

p. 22. Natural gas for fuel and lighting was turned into the mains at Texarkana, Texas, November 27, and is furnished consumers at a rate of 27-1/2 cents a thousand for domestic purposes and 10 centers per thousand for public utilities and manufacturing plants. The supply comes from the gas well on the Rogers Farm, near Lewis Station, five miles north of Caddo, Louisiana, and forty-seven miles south of Texarkana on the Kansas City Southern Railroad.

p. 24. Natural Gas Notes. John C. Haupt, president of the Dallas Gas and Oil Company, has applied for a franchise to pipe Dallas for natural gas, the supply to come from the Petrolia, Clay County, Texas, District.

It is reported that McAlester, Oklahoma, will grant a franchise to L. C. Featherstone & Company to pipe the city for natural gas. Featherstone & Company recently developed gas in a test well near McAlester.

The Forth Worth Light and Power Company, it is reported, will ask Fort Worth for a franchise to pipe the city for natural gas, the supply to come from the Petrolia, Clay County, Texas, Field.

A. J. Yoke, of Van Buren, Arkansas, is reported a probable applicant for a franchise to pipe Van Buren for natural gas.

Vol. 7, No. 15, Jan. 6, 1909, p. 16. Incorporated. Texas. Sunset Oil and Gas Company of Sunset, incorporated, with J. W. Harvey, president, W. R. Potter, vice-president, and J. F. Long, secretary.

Oklahoma. West Virginia Oil Company of Sapulpa, incorporated with \$25,000 capital, by Lewis B. Jackson, Sapulpa, Frank B. Ufer, Tulsa, and R. S. Litchfield, Independence, Kansas.

Mutual Oil, Gas, Mineral Producing and Manufacturing Company of Waynoka, incorporated with \$50,000 capital, by William H. Gummere, Waynoka, H. Mountell, Alva, Oklahoma, John Relph, Peru, Kansas, and others.

Loretto Oil and Gas Company of Nowata, incorporated with \$30,000 capital stock, by C. F. Noble, Catherine Cunningham, and others.

Knabe Oil Company of Nowata, incorporated with \$10,000 capital, by S. G. Tuttle, James Kykok, both of Bartlesville, Oklahoma, C. E. Ritter, Nowata, and E. A. Ross, Ramona, Oklahoma.

Blanche Oil Company of Muskogee, incorporated with \$10,000 capital, by Charles A. Weil, Blanche B. Weil, both of Muskogee, and George T. Buernse, Independence, Kansas.

Chatham Oil and Gas Company of Nowata, incorporated with \$50,000 capital, by J. S. Hout, L. E. Hout, both of Miami, Oklahoma, and William Kinley, Olean, New York.

Helen Oil Company of Tulsa, incorporated with \$25,000 capital, by E. R. Minshall, R. L. Davidson, and C. W. West.

Little Bill Oil Company of Tulsa, incorporated with \$10,000 capital, by A. G. Reed, Charles F. Roeser, and E. D. Smith.

Commonwealth Oil Company of Bartlesville, incorporated with \$50,000 capital, by L. A. Lowland, Bartlesville, L. S. Clough and W. E. Rice, Warren, Pennsylvania.

Nyno Oil Company of Bartlesville, incorporated with \$50,000 capital, by W. H. Johnson, B. L. Love, and Roswell H. Johnson.

Creston Oil Company of Bartlesville, incorporated with \$100,000 capital, by Waite Phillips, F. J. Spies, Jr., and C. D. Young.

Henry Gas Company of Bartlesville, incorporated with \$10,000 capital, by James A. Veasey, Lucy M. Jennings, both of Bartlesville, and Robert L. Henry, Chicago, Illinois.

Second Oil Company of Holdenville, incorporated with \$10,000 capital, by H. B. Gooch, O. D. Smith, L. C. Parmenter, and R. W. Parmenter.

Saunders Oil and Gas Company of Tulsa, incorporated with \$20,000 capital, by T. S. Saunders, G. G. Sharpe, and E. S. Harris.

Martha Oil Company of Muskogee, incorporated with \$8,000 capital, by C. H. Matten, W. L. Linlard, both of Muskogee, F. C. Smedley and A. W. Smedley, both of Tulsa, Oklahoma.

p. 22. A. P. Dyke of Hope, Arkansas, is drilling for oil and gas on his land within eight miles of Hope. On December 18, the eight inch was down 240 feet. Mr. Dyke has leased up most of the land in the vicinity.

p. 25. Notes. The Fort Worth Light and Power Company is seeking a franchise to supply Fort Worth with natural gas for a term of fifty years at 45 cents per one thousand feet. The gas is to come from the Petrolia Field, in Clay County, over 100 miles north of Fort Worth.

Vol. 7, No. 16, Jan. 20, 1909, p. 15. Incorporated. Texas. Trinity River Oil Co. of San Antonio, \$5,000 capital, by C. L. Bass, T. H. Bass, and Lee Kinnebrew.

Oklahoma. The Brookins Oil Company of Nowata, \$10,000 capital, incorporators, B. L. Brookins, P. S. Powell, B. H. Robertson, and E. B. Lawson.

The H. H. Breene Company of Bartlesville, \$10,000 capital, incorporators, H. H. Breene, A. A. Smith, and Burdette Blue.

The Henry Oil & Gas Company of Bartlesville filed amended articles of incorporation, increasing its capital stock from \$10,000 to \$125,000.

The G. W. Yerian Oil & Gas Company, Porum, capital \$2,500. Directors, G. W. Yerian, W. P. Parke, W. T. Miller, M. C. Jordan, R. L. Pearl, all of Porum.

Kenneth Oil Company, Muskogee, capital \$5,000. Directors, Edward H. Junk, James A. Peterson, both of Muskogee, Frederick H. Wickett, Chicago.

The Elk County Oil & Gas Company, of Tulsa, has been chartered here, capital \$25,000. Incorporators, J. K. Gardner, W. P. Murphy, of Ridgeway, Pennsylvania, and George B. Harmon, Milton J. Maxwell, Tulsa.

Lucas Oil Co., of Tulsa, \$5,000 capital, by F. B. Ufer, P. J. White, and R. W. Kellough.

Octo Oil Co., of Bartlesville, \$40,000 capital, by H. Weber, H. C. Weber, and M. U. Weber.

Pittsburg Oil & Gas Co. of McAlester, \$10,000 capital, by James Stalcup, Charles S. Brice, Edward S. Ellis, and others.

Crown Oil Co. of Muskogee, \$10,000 capital, by E. J. Lambert, L. M. Brown, and H. R. Deton, all of Independence, Kansas.

Porter Gas Co., of Muskogee, \$10,000 capital, by J. H. Huckleberry, M. Huckleberry, and R. Hamlin.

p. 15. North Texas towns will have natural gas next month. The Clayco Oil & Pipe Line Company expects to be distributing gas in Henrietta and Wichita Falls, Texas, from the Petrolia, or Clay County Field, by February 1. A four-inch line has been laid from the well on the Panhandle land to Henrietta, twelve miles south, and extends west from that place to Wichita Falls, a distance of about 15 miles. Work on this line will be completed this week. Gas mains are being laid in both Henrietta and Wichita Falls, and will be ready by the end of the month. The Clayco Company has also piped the town of Petrolia, and is supplying about sixty houses there. A survey has been run by this company from the field to North Fort Worth, taking in Bowie and Decatur, both of which towns have granted the Clayco people natural gas franchises. An application to pipe North Fort Worth for gas has been made by the Clayco Company, and has passed to third reading. It is expected that it will come up for final action before the end of this week. The line from the field to North Fort Worth will be about 100 miles long.

Vol. 7, No. 17, Feb. 6, 1909, p. 23. Operations of the Santa Fe Company. Four wells were completed in 1908 by the Santa Fe Company, at Wheeler, 18 miles west of Ardmore, Oklahoma, on the Gulf, Colorado, and Santa Fe, a few miles north of the Texas line. Three of the completions were combined oil and gas producers, and one a gas well. This record compares with fifteen completions in 1907, seven oil producers, three oil and gas, two gas, and three dry holes. The average output of the oil wells was about 30 barrels. All work, excepting one string of tools, was shut down in March, and was not resumed until October, when two additional rigs were put on. At the close of the year, three wells were drilling, one being

a deep test. Following are complete well statistics for the district:

	Completions	Oil	Gas	Gas-Oil	Dry
1906	8	3	0	3	2
1907	15	7	2	3	-3
1908	<u>4</u>	<u>0</u>	<u>1</u>	<u>3</u>	<u>0</u>
Total	27	10	3	9	5

In addition to the wells appearing in the table, two water wells were drilled and two other holes abandoned before completion.

The oil wells in this district are not being pumped because there is no outlet for the production. Gas deliveries to the Ardmore Gas Company at Ardmore were begun by the Santa Fe Company in December 1906 and up to the same month in 1907, total deliveries amounted to approximately 950,000 cubic feet. During 1908, deliveries totaled approximately 212,000,000 cubic feet, supplying Ardmore and the small town of Sneed, Oklahoma, besides a small consumption on the line.

The Santa Fe Company, in March 1908, stopped practically all its development work in the Saratoga, Texas, District, drilling only one well, a producer, and this merely to protect the line. The Santa Fe Company has drilled a total of twenty wells in this district. Eight were producing at the close of 1908. The gross output was 40,000 barrels in 1908.

p. 39. Historic figure passes from the scene. James Scott Glenn died at Hot Springs, Arkansas, on Thursday, January 21, 1909. Mr. Glenn has been ill for several months, and his death, while a great shock to his friends, was not a surprise. The body was taken to Parkersburg, West Virginia, where Mr. Glenn lived in early life, and it was there the burial took place on Tuesday, January 26.

Mr. Glenn was prominently associated with the earliest development of the oil industry in what is now the state of Oklahoma. In 1896, when Oklahoma was the Indian Territory, he and one or two associates secured from the Interior Department at Washington, a blanket lease to develop oil and gas on 1,500,000 acres of the lands of the Osage Nation. This was long before the era of railroads in this country, and before there was any immediate prospect of statehood. The lease had ten years to run. Glenn was the moving spirit in the undertaking. He was a man of dogged persistence in whatever he undertook, and it was this quality in him that enabled him to carry this enterprise to such a successful conclusion.

After the big lease was obtained, the Indian Territory Illuminating Oil Company was formed, and took it over. In the ten years of the life of the original lease, the company itself and through its sub-lessees, drilled 700 oil and gas wells, and thus made the beginning of the oil and gas business as seen in the Oklahoma of today.

The lease expired March 5, 1906, and E. A. Hitchcock, then Secretary of the Interior, was asked to renew it, but refused to do so. Mr. Glenn and his associates then appealed to Congress, and finally got through a bill granting them a lease for the period of ten years on 680,000 acres of Osage land. This is the lease that is now being operated by the Indian Territory Illuminating Oil Company. Glenn's interest in the company made him rich, but the strain on him in obtaining these leases, and in his fight with Secretary Hitchcock, was too much for him. His nervous system collapsed, and all the efforts he made to restore his health were in vain.

His fortune is estimated at half a million dollars. He built a beautiful residence in Tulsa, and leaves a young widow and two small children.

p. 39-42. Notes. by John R. Reavis, associate editor. p. 41. The Pittsburg Oil and Gas Company drilling the test near Featherstone, 15 miles northeast of McAlester, is down 1,500 feet, and has about 1,000,000 cubic feet of gas. The outlook for oil is favorable. There is much leasing going on in that vicinity. The Pittsburg Oil and Gas Company has secured a franchise from McAlester to supply that city with gas at 25 cents a thousand cubic feet, for a period of 25 years.

A line has been completed from Muskogee to the gas field in that vicinity. This is to be used as subsidiary to the main Caney River Gas Company line that now supplies the city. It is to be used only in case of a break in the main line.

There are now five wells in the Muskogee Gas Field.

It now looks as if the Oklahoma and Osage Natural Gas Company, and not the Henry Oil Company, would supply the city of Tulsa with gas for manufacturing purposes. Negotiations to that end are now in progress, and it looks as though they would be successfully concluded. This is the company that already supplies Tulsa with gas for household purposes. It has connections with extensive gas fields near the city.

p. 43. Some facts as to the Indian Territory Illuminating Oil Company. by John R. Reavis, associate editor. Tulsa, Oklahoma, January 29, 1909. Just now when public attention in Oklahoma and elsewhere is especially directed to the Indian Territory Illuminating Oil Company, a few facts concerning its history will be of interest.

Prior to 1896, the oil and gas development in what was then Indian Territory was very limited. It was known that oil and gas were in the country, and that was about all. In that year, Henry Foster of Rhode Island, and James S. Glenn, of Parkersburg, West Virginia, negotiated a lease with the Indians of the Osage Nation on 1,500,000 acres of land. This lease was confirmed by the Secretary of the Interior, Hoke Smith, in the same year. Under its terms, drilling had to be commenced within six months, and had to be kept up continuously. A cessation for a period longer than six months forfeited the lease.

Foster organized the Phoenix Oil Company to commence operations, and drilled the first well in August, 1896. This was a dry hole. A second well was drilled near the north line of the Osage Nation, just south of Elgin, Kansas, and this too, was a dry hole. Foster and associates then moved thirty miles south to what is known as sublease 32, and drilled a third well in October, 1896. They found a little oil, but not enough to pay.

The Phoenix Oil Company was now \$75,000 in, and practically bankrupt. Henry Foster died at this time, but his work was continued by his brother Edward B. Foster. The Osage Oil Company was formed to take over a portion of the big lease, and further development on sub-lease 32 was continued until the Fall of 1901, when Mr. Foster and his associates were confronted by a depleted treasury and a debt of \$60,000.

It was then that the Indian Territory Illuminating Oil Company was formed. Edward B. Foster died, and H. V. Foster, son of Henry Foster, took the management of affairs. He raised money to pay off the debts of the company, and carried on development work for a distance of sixty miles south of the Kansas line, and as far west as Pawhuska. In 1904, the Stevens Point Oil Company, a sub-company formed by H. V. Foster, discovered the big pool west of Ocheleta, which instantly gave the Osage lease a great value in the commercial world. Subsequently, the Wigwam Oil Company and the Waukesha Oil Company defined the limits of this pool in sub-leases 170 and 171, as far as six miles west. From that time, the Indian Territory Illuminating Oil Company began to grow rapidly in the extent of its operations. About 300 sub-companies were formed, and in 1908 the production of oil averaged 412,000 barrels per month. As much as \$30,000 a month was paid in royalties to the Osage Indians.

The original lease expired in 1906. The Indian Territory Illuminating Oil Company had sub-leased about 680,000 acres of its holdings to about 300 different sub-lessees, and on March 3, 1905, an act of Congress renewed said lease and all sub-leases thereof duly executed on or before December 31, 1904, or executed after that date, based upon contracts made prior thereto, and which have been or shall be approved by the Secretary of the Interior, to the extent of 680,000 acres.

The reason it was fixed at 680,000 acres was because valid sub-leases to that extent had been made, and it was the sub-leased territory over which the renewal for ten years had force. These leases of the company gave to the sub-lessees all right, power, and authority over the oil. The parent company only reserved the royalty and the gas.

Thus it will be seen that the Indian Territory Illuminating Oil Company has not this vast acreage itself. The fact is, it has only about 30,000 acres reserved to itself. Many of the sub-lease companies are very important in the oil world. Each sub-lease is confirmed or approved by the Department of the

Interior, and is dealt with separately from the parent company. This territory is pretty well defined now, and it is claimed that only about 20,000 acres of it appears to be fairly good remunerative property. The officers of the Indian Territory Illuminating Oil Company state, that out of 300 sub-leases, only about fifteen are making any money to speak of. These facts were shown in evidence in the recent case commenced by the state of Oklahoma.

The gas reserved by the parent company is mostly used through small pipe lines to supply the producers with fuel in the operation of the leases.

p. 54. Incorporated. Oklahoma. Armstrong Oil Company of Bartlesville, capital, \$10,000. Directors, D. B. Mason, C. T. Burns, and C. A. Lamm.

Grant County Oil, Gas, and Mineral Company, Jet, Alfalfa County. Capital, \$25,000. Directors, C. M. Owen, Florence; F. P. Gary and D. M. Owings, Jet.

Dawson Oil Company, Bartlesville, capital \$25,000. Directors, John R. Baird, James Brann, H. H. McClintock.

Grand County Oil, Gas and Mineral Company, Fairfax; capital \$3,500. Directors, W. G. Lynn, R. H. Hoss, N. H. Hoss, all of Fairfax.

Loretto Oil and Gas Company, Nowata, with branch office at Independence, Kansas, capital \$30,000. Directors, Catherine Cunningham and F. C. Noble, of Nowata, Francis Borelli, of Bartlesville; W. J. Bovaird, Walter S. Sickles, C. L. Bloom, T. H. Stanford, all of Independence, Kansas.

Miscellaneous. Rich Hill Natural Gas Co. of Rich Hill, Mo., capital \$12,000. Incorporators, H. M. Ruble, W. W. Cheventon, J. W. Jamison, and others.

p. 71. James W. Sloan (portrait). Better known in Oklahoma, Texas, and Louisiana - and, for that matter, wherever he goes - as Jim Sloan. Tall, but willing to stoop down if there is a chance to get business from a short man; serious when it is necessary, but not half so serious-looking as the camera would have us believe; of good old Irish stock, with his full share of the wit that has made the Dutch envious of the Irish - there you have a lightning sketch of him. He originated in petroliferous Pennsylvania, making his Texas debut at Corsicana, where oil had its beginning in the Lone Star State. He went to South Texas early in the game, was at Jennings, La., for a while, then emigrated to Oklahoma. He has been in Tulsa since the Glenn Pool started the ball rolling in this thriving young city. The Oklahoma Iron Works, of which he is president and head pusher, is one of the new state's most creditable and successful industrial enterprises. His activities extend also to the oil business, embracing interests in the Glenn Pool and elsewhere.

p. 71-73. Oklahoma, Kansas, Louisiana, and North Texas Producers, Operators, and Royalty Owners. North Texas. Powell. Address Corsicana, Texas, unless otherwise stated.

American Well & Prospecting Co.	Junior oil & Pipe Line Co.
Baker, W. G.	Kerr, Mrs. S. A.
Burke, J. O.	Lea, P. M.
Butler Savings & Trust Co.	McClellan, J. J.
Caldwell, R. B.	McDonald, W. E.
Cardmody, T. J.	Morrison, A. M.
Carmody & Witherspoon	Morrison-Witherspoon Oil Co.
Castles, C. M., Oil Co.	Peck, W. M.
Corsicana Petroleum Co.	Prince, R. E.
Cox Oil Co.	Scharbauer, John
Ennis Oil & Developing Co.	St. Louis Southwestern Ry. Co. of Texas
Fergusson, Aaron	Staley, W. H.
Ferris Oil Co.	Tatum, W. M.
Garitty, James	Thompson, John A.
Garitty & Whiteselle	Thompson, Mrs. Maud
Gibson, Clarkson & Gulick	West, C. S.
Halbert, L. J.	Whitehill, F. T.
Hardy, Rufus	Witherspoon, C. L.
Heflin, G. J.	
Independent Oil Co.	

Petrolia (or Henrietta), Texas. Address Petrolia, Clay County, Texas, unless otherwise stated.

Allison & Sanders	Leete, C. W.
Bates, P. A.	McCutcheon, W. A.
Brunner & Stanger	Navarro Refining Co.
Buckley, Brock & Mitchell	Patterson, S. A.
Clayco Oil & Pipe Line Co.	Patterson & McAlister
Corlett, Taylor & McCue	Patton & Kelly
Dempsey, S. E.	Reed-Winfrey Oil Co.
Dodson, J. M.	Root, G. E. & Co.
Hunt, J. O.	Steele, W. H.
Hunt & McGregor	Valley Oil Co.
Joyce & Wyatt	Webber & Smith
Kuehn, A. A. & J. C.	Wichita Oil Co.
Kuehn, Mrs. Pearl	Wick, H. M.
Landrum, B.	Witherspoon & Carmody

Louisiana. Caddo.

Black Bayou Oil Co., care L. E. Etchison, Shreveport
 Brown, Mrs. A. E., Oil City
 Caddo Gas & Oil Co., Shreveport
 Caddo Oil & Mining Co., care C. W. Lane, Shreveport
 Colquitt, R. J., Marfa, Texas
 Etchison & Mayfield, Shreveport
 Filer, Frank, 1217 Chamber of Commerce, Detroit, Mich.
 Glassell Bros., Belcher
 Gloyd, A. M., care Gloyd Lumber Co., Kansas City, Mo.
 Gulf Refining Co. of La., Shreveport
 Hardy, C. W., Shreveport
 Hardy, G. W., Box 120, Shreveport
 Hostetter, S. C., Mooringsport
 Lane, C. W., Shreveport
 Liebman, L., Shreveport
 Louisiana Oil Co., The, care H. L. Heilperin, Shreveport
 Murray, John, Oil City
 Oil City Land & Oil Co., care F. J. Looney, Continental Bank Bldg., Shreveport
 Producers Oil Co., Shreveport
 Reliance Oil Co., care D. C. Richardson, Shreveport
 Richardson, T. M., Oklahoma City, Okla.
 Richardson Oil Co., care D. C. Richardson, Shreveport.

Louisiana. Jennings. Address, Jennings, La., unless otherwise stated.

Acadia Oil Co.	Houssiere-Latrielle Oil Co.
Arlington Oil Co.	Jennings Oil Co.
Caffery & Martel	Jennings-Heywood Oil Syndicate
Carencro Oil Co.	Knott Oil Co.
Chicago-Jennings Oil Co.	National Oil Co.
Crowley Oil & Mineral Co., Crowley	Noble Oil Co.
Evangeline Oil Co.	Producers Oil Co.
Gulf Refining Co. of La.	Teche Oil Co.
Harry Oil Co.	Underwood Oil Co.
Heywood Oil Co., Beaumont, Texas	Zigler Oil Co.

Louisiana. Anse la Butte.

Guidroz Oil Co., Breaux Bridge.
 Lake Oil Co., Breaux Bridge.

Oklahoma and Kansas. The following list of Oklahoma and Kansas producers is made up in part from the roster of the Mid-Continent Oil and Gas Producers Association, and, while not complete, represents a large proportion of the active operators in the Mid-Continent region.

Adams Bros., McCloud, Okla.	Aiken, F. M., Tulsa, Okla.
Adams, H. H., Chelsea, Okla.	Alluwe Oil Co., Lawrence, Kans.
Adams, J. F., McCloud, Okla.	Anderson, H. P., Tulsa, Okla.

Andrews, E. E., Okmulgee, Okla.
 Annin Oil Co., Erie, Pa.
 Argue, H. H., Tulsa, Okla.
 Argue, H. W., Lima, Ohio
 Armstrong, C. M., Tulsa, Okla.
 Aspinwall, W. H., Bartlesville, Okla.
 Avery, Cyrus S., Tulsa, Okla.
 Babb, C. T., Nowata, Okla.
 Baker, F. A., Tulsa, Okla.
 Barnes, G. W., Muskogee, Okla.
 Barnes, George W., Jr., Muskogee, Okla.
 Barnsdall, N. B., Bartlesville, Okla.
 Barnsdall, T. N., Pittsburgh, Pa.
 Barrett, Lee., Vinita, Okla.
 Bartlett, F. L., Olean, N. Y.
 Baxter, A. B., Pittsburgh, Pa.
 Beacon Oil Co., Tulsa, Okla.
 Bean, Lee, Tulsa, Okla.
 Bechtel, W. F., Tulsa, Okla.
 Bell, John A., Pittsburgh, Pa.
 Bell, W., Casey, Ill.
 Bennett, D. O., Greensburg, Pa.
 Benson, R. D., Tulsa, Okla.
 Benson, W. S., Tulsa, Okla.
 Berg, J. P., Tulsa, Okla.
 Berry, Guy T., Tulsa, Okla.
 Big Chief Oil & Gas Co., care of
 Cyrus S. Avery, Tulsa, Okla.
 Bishop, S. D., Lawrence, Kans.
 Black, J. F., Tulsa, Okla.
 Blaise, E. F., Tulsa, Okla.
 Bloom, C. L., Independence, Kans.
 Boggs, O. P., Bartlesville, Okla.
 Bolard, J. N., Independence, Kans.
 Braden, G. T., Pittsburgh, Pa.
 Bradley, J. H., Chelsea, Okla.
 Brady, W. T., Tulsa, Okla.
 Branson, Hugh, Nowata, Okla.
 Brennan, J. H., Bartlesville, Okla.
 Bridgman, F. R., Nowata, Okla.
 Brown, Frank, Independence, Kans.
 Brown, N. W., Independence, Kans.
 Brundred, W. J., Oil City, Pa.
 Bucher, S. F., Bartlesville, Okla.
 Burns, Joe, Sapulpa, Okla.
 Burns & Caton, Sapulpa, Okla.
 Campbell, C. E., Nowata, Okla.
 Campbell, H. C., Nowata, Okla.
 Campbell, J. E., Nowata, Okla.
 Campbell, James P., Copan, Okla.
 Canadian Oil & Gas Co., Tulsa, Okla.
 Canary, J. D., Caney, Kans.
 Canary Oil Co., Independence, Kans.
 Caton, L. B., Sapulpa, Okla.
 Chase, W. A., Nowata, Okla.
 Cheney, H. G., Nowata, Okla.
 Clark, James D., Nowata, Okla.
 Clover, S. C., Robinson, Ill.
 Coburn, G. S., Bartlesville, Okla.
 Cohn, Isaac, Chelsea, Okla.
 Collins, Ray, Tulsa, Okla.
 Compton, O. W., Tulsa, Okla.
 Connolly, D. F., Tulsa, Okla.
 Connolly, W. L., Independence, Kans.
 Crawford, George W., Pittsburgh, Pa.
 Crawford, John M., Parkersburg, W. Va.
 Crosbie, J. E., Tulsa, Okla.
 Crum, E. M., McCloud, Okla.
 Cudahy Oil Co., Bartlesville, Okla.
 Curry, James A., Bartlesville, Okla.
 Curtin, William W., Lima, Ohio
 Dallas Co., The, Tulsa, Okla.
 Daugherty, C. T., Nowata, Okla.
 Davis, George, Tulsa, Okla.
 Davis, Thomas C., Bartlesville, Okla.
 Davis, W. A., Nowata, Okla.
 Delaware Indian Oil Co., Caney, Kans.
 Devonian Oil Co., Pittsburgh, Pa.
 Dodge, W. D., Nowata, Okla.
 Dunn, S. J., Bartlesville, Okla.
 Dyson, J. W., Bartlesville, Okla.
 Eastell, R. F., Bartlesville, Okla.
 Eastern Oil Co., Buffalo, N. Y.
 Eldred, J. G., Okmulgee, Okla.
 Emery, Delevan, Bradford, Pa.
 Emery, Lewis, Jr., Tulsa, Okla.
 Emery Oil Co., Bradford, Pa.
 Evan, J. H., Tulsa, Okla.
 Evans, O. A., Bartlesville, Okla.
 Fancher, A. T., Salamanca, N. Y.
 Filley, O. E., Okmulgee, Okla.
 Flanagan, D. D., College Hill, Ohio
 Foley, P. T., Cleveland, Ohio
 Forbes, George, Olean, N. Y.
 Forman, George A., Nowata, Okla.
 Franchot, D. W., Tulsa, Okla.
 Franchot, N. V. V., Olean, N. Y.
 Frazier, R. E., Eldorado, Kans.
 Fuller, R. A., Chelsea, Okla.
 Fulton, C. B., Bartlesville, Okla.
 Fulton Oil & Gas Co., Olean, N. Y.
 Furlong, John T., Pittsburgh, Pa.
 Galbraith, H. H., Independence, Kans.
 Galbreath, Robert, Tulsa, Okla.
 Galbreath & Chesley, Tulsa, Okla.
 Garnett, H. G., Nowata, Okla.
 Geizer, William M., Neodesha, Kans.
 Gillespie, F. A., Tulsa, Okla.
 Givens, James M., Muskogee, Okla.
 Glass, J. Wood, Nowata, Okla.
 Graham, Jesse, Toledo, Ohio
 Greenlees, A., Lawrence, Kans.
 Greenlees, J. R., Lawrence, Kans.
 Groves, Stearns & Fisher, Tulsa, Okla.
 Gunsburg, David, 66 Dunn Bldg.,
 Pittsburgh, Pa.
 Gypsy Oil Co., Tulsa, Okla.
 Hall, Albert E., Bartlesville, Okla.
 Hall, A. E., Muskogee, Okla.
 Hammett, Charles H., 318 Rookery,
 Chicago, Ill.
 Hammett, Jim L., Huntsville, Mo.
 Hamsher, L. E., Bradford, Pa.
 Hannaford, E. P., Nowata, Okla.

Harmon, George B., Bartlesville, Okla.
 Harter, Charles, Illion, N. Y.
 Hayden, John F., Tulsa, Okla.
 Heald, R. J., Tulsa, Okla.
 Henderson, Frank C., Nowata, Okla.
 Henry, D. W., Terre Haute, Ind.
 Henry, Robert L., 1318 Marquette Bldg.,
 Chicago, Ill.
 Henry Oil Co., same as above
 Hertz, Freeman, Warren, Pa.
 Heywood Oil Co, by Trustee, Beaumont,
 Texas
 Higgins, Thomas B., Bartlesville, Okla.
 Higgins Oil & Fuel Co., by Trustee,
 Beaumont, Texas
 Hinkle, J. B., Ramona, Okla.
 Hinton, E. L., Chelsea, Okla.
 Hirsh, Manuel, Tulsa, Okla.
 Hohman Oil Co., Chelsea, Okla.
 Holden, J. F., Muskogee, Okla.
 Hollingsworth, P. S., Independence, Kans.
 Hookey, W. R., Nowata, Okla.
 Huckleberry & Sheets, Muskogee, Okla.
 Huddleston & Hohman, Chelsea, Okla.
 Hull, Arthur J., Independence, Kans.
 Indian Territory Illuminating Oil Co.,
 Bartlesville, Okla.
 Inland Oil Co., W. C. Tyrell, Sapulpa,
 Okla.
 Iron Mountain Oil Co., J. M. Clover,
 Tulsa, Okla.
 Jackson, A. C., Sisterville, W. Va.
 Jamison, S., Tulsa, Okla.
 Jeffords, W. L., Chelsea, Okla.
 Jennings, S. A., Cherryvale, Kans.
 Johnson, J. S., Bartlesville, Okla.
 Johnson, Paul, Bartlesville, Okla.
 Johnson, W. H., Bartlesville, Okla.
 Johnstone, Wm., Bartlesville, Okla.
 Jordan, Robert, Muskogee, Okla.
 Kane, John, Bartlesville, Okla.
 Kansas Southern Oil Co., Sterling, Kans.
 Kelough, R. W., Tulsa, Okla.
 Kemp, E. R., Tulsa, Okla.
 Kemp, Fred, McCloud, Okla.
 Kerr, C. A., Rialto Bldg., Chicago, Ill.
 Kerr, J. B., Tulsa, Okla.
 Kerr, P. M., Tulsa, Okla.
 Keystone Oil & Gas Co., Tulsa, Okla.
 King, R. N., Dayton, Ohio
 Kirkwood, W. J., Nowata, Okla.
 Knight, Morris F., Vinita, Okla.
 Knight, W. L., Sapulpa, Okla.
 Kolter, G. A., Nowata, Okla.
 Kreps, Ad., Sapulpa, Okla.
 Laney, Thomas G., Lima, Ohio
 Lannom, H. D., Bartlesville, Okla.
 Larkin, J. J., Bartlesville, Okla.
 Lawson, E. B., Nowata, Okla.
 Lee, J. W., Farmers Bank Bldg.,
 Pittsburgh, Pa.
 Leonard, Archie W., Tulsa, Okla.
 Leonard, J. R., Pittsburgh, Pa.
 Letcher, Frederick R., Tulsa, Okla.
 Letcher, O. T., Tulsa, Okla.
 Litchfield, M. E., Independence, Kans.
 Litchfield, R. S., Independence, Kans.
 Lockwood, M. L., Tulsa, Okla.
 Lockwood, Philo W., Tulsa, Okla.
 Logan, G. W., Exchange Bldg., Denver, Co.
 Lord, H. C., Marietta, Ohio
 Lovell, J. A., Marietta, Ohio
 Lovell, Paul, Nowata, Okla.
 Low, M. A., Topeka, Kans.
 Lowry, Thomas, Bartlesville, Okla.
 Loy, D. S., Peru, Kans.
 Lusher Bros., Ruggery Bldg., Columbus, Ohio
 Lusher, C. W., Columbus, Ohio
 Lusher, P. W., Columbus, Ohio
 Lyle, J. S., McCloud, Okla.
 Mallory & Son, L. E., Bradford, Pa.
 Mandeville, W. Harry, Olean, N. Y.
 Marchant, J. A., McCloud, Okla.
 Marcus, H. W., Olean, N. Y.
 Markham, J. H., Jr., Bartlesville, Okla.
 Martin, L. J., Tulsa, Okla.
 Martin, Victor, Tulsa, Okla.
 Matson, C. S., Bartlesville, Okla.
 Matson Oil Co., Bartlesville, Okla.
 McClaren, D. P., Tyro, Kans.
 McConnell, P. D., Bartlesville, Okla.
 McCormick, Matt, Nowata, Okla.
 McCready, C. H., Neodesha, Kans.
 McCready, J. E., Okmulgee, Okla.
 McFarlain, R. M., Kiefer, Okla.
 McKean, James A., Smithport, Pa.
 McMahan, C. L., Bartlesville, Okla.
 McMahan, H. W., Bartlesville, Okla.
 McMahan, John L., Nowata, Okla.
 McPherson, E. A., 1039 N. Meridian St.,
 Indianapolis, Indiana
 McTaggart, Edward, Sapulpa, Okla.
 Mehlin, Charles H., Alluwe, Okla.
 Meloy, J. E., Bartlesville, Okla.
 Millikin, W. H., Tulsa, Okla.
 Missouri Mining Co., Vinita, Okla.
 Mitchell, John O., Tulsa, Okla.
 Moellendick, Fred, Tulsa, Okla.
 Mooney, J., McCloud, Okla.
 Moore, C. F., Muskogee, Okla.
 Moore, Clint, Bartlesville, Okla.
 Moore, Frank L., Tulsa, Okla.
 Moore, Luther R., Marietta, Ohio
 Moore, M. L., Pittsburgh, Pa.
 Moore, W. P., Tulsa, Okla.
 Moore, Wm. L., Nowata, Okla.
 Morris, A. S., Ochelata, Okla.
 Moseley, M. A., Bartlesville, Okla.
 Mosier, M. H., Tulsa, Okla.
 Mowris, W. S., Tulsa, Okla.
 Muller, M., Tulsa, Okla.
 Munger, A. L., Copan, Okla.

Murdock, S. T., Lafayette, Ind.
 Needles, Homer, Muskogee, Okla.
 Neely, Fred M., Independence, Kans.
 Neely, Milton L., Lima, Ohio
 New State Oil Co., Lima, Ohio
 New York Oil Co., Tulsa, Okla.
 Newell, W., Cleveland, Okla.
 North, E. N., Tulsa, Okla.
 Norton, W. L., Bartlesville, Okla.
 Nutt, C. B., McCloud, Okla.
 Oglesby, Robert, Tulsa, Okla.
 Oklahoma State Oil Co., Tulsa, Okla.
 Okla Oil Co., Tulsa, Okla.
 Owen, Charles A., Caney, Kans.
 Page, Charles, Tulsa, Okla.
 Parmenter, W. L., Lima, Okla.
 Patton, I. W., Kiefer, Okla.
 Payne, J. H., Nowata, Okla.
 Perry, E. R., Tulsa, Okla.
 Pollard, John B., Independence, Kans.
 Powell, P. S., Nowata, Okla.
 Prairie Oil & Gas Co., Independence, KS
 Preston, H. M., Bartlesville, Okla.
 Priestly, George C., Bartlesville, Okla.
 Producers Oil Co., Tulsa, Okla.
 Pure Oil Co., Philadelphia, Pa.
 Raydure, W. S., Bartlesville, Okla.
 Reese, A. B., Independence, Kans.
 Renfrow, W. C., Kansas City, Mo.
 Renfrow Oil & Gas Co., Bartlesville, OK
 Riter, O. E., Nowata, Okla.
 Ritts, J. V., Butler, Pa.
 Roberts, W. E., Nowata, Okla.
 Roeser, C. E., Tulsa, Okla.
 Roeser, W. H., Tulsa, Okla.
 Rood, R. D., Bartlesville, Okla.
 Roth, C. E., Independence, Kans.
 Roth, P.W., 51 Richmond Ave., Buffalo, N.Y.
 Rowe, Fred S., Nowata, Okla.
 Rowland, L. R., Bartlesville, Okla.
 Ryan, Edward C., Tulsa, Okla.
 Sagamore Oil & Gas Co., Bartlesville, Okla.
 Sands, Louis C., Pittsburgh, Pa.
 Sawyer, F. L., Independence, Kans.
 Sawyer, W. G., Nowata, Okla.
 Scott, H. B., Chanute, Kans.
 Selby, A. D., Sapulpa, Okla.
 Selby, F. M., Sapulpa, Okla.
 Selby, W. G., Sapulpa, Okla.
 Selby Oil & Gas Co., Sapulpa, Okla.
 Shainer, W. A., Turley, Okla.
 Shaw, J. G., Biddeford, Maine
 Shawnee Oil & Gas Co., Independence, Kans.
 Shea, J. J., Bartlesville, Okla.
 Shoenfelt, G. Blair, Muskogee, Okla.
 Shultis, A. W., Independence, Kans.
 Sill, W. N., Nowata, Okla.
 Simpson, Thomas B., Bartlesville, Okla.
 Sinclair, Harry F., Independence, Kans.
 Slater, E. J., Tulsa, Okla.
 Sloan, J. W., Tulsa, Okla.
 Smith, John, Independence, Kans.
 Smith, H. E., Marietta, Ohio
 Snider, Ward M., Nowata, Okla.
 St. Louis Oil Co., Independence, Kans.
 Steel, Gardner, Tulsa, Okla.
 Steel, John A., Tulsa, Okla.
 Stewart, C. I., Tulsa, Okla.
 Stewart, Edward, Tulsa, Okla.
 Stewart, W. I., Tulsa, Okla.
 Stewart, W. J., Tulsa, Okla.
 Stich, A. C., Independence, Kans.
 Strong, G. H., Olean, N. Y.
 Summers, G. E., Nowata, Okla.
 Super-Consolidated Oil Co., Nowata, Okla.
 Taggart, J. B., Tulsa, Okla.
 Texikan Oil Co., Cleveland, Okla.
 Thompson, A. J., Titusville, Okla.
 Todd, W. D., Chelsea, Okla.
 Treat & Crawford Co., Pittsburgh, Pa.
 Troy, John, Olean, N. Y.
 Tucker, W. B., Nowata, Okla.
 Tupper, B. S., Tulsa, Okla.
 Vandell, George, Bartlesville, Okla.
 Vandersall, A. F., Nowata, Okla.
 Veasey, James A., Bartlesville, Okla.
 Veasey & Rowland, Bartlesville, Okla.
 Victor Oil Co., Muskogee, Okla.
 Victor Oil & Gas Co., Tulsa, Okla.
 Walker, George W., Muskogee, Okla.
 Walker, J. L., Bartlesville, Okla.
 Weible, H. C., Chelsea, Okla.
 Weir, W. G., Owasso, Okla.
 Welsh, Artemus, Alluwe, Okla.
 Wettack, John A., Nowata, Okla.
 White, P. J., Tulsa, Okla.
 White, Thomas, Tulsa, Okla.
 Whitehill, B. F., Marietta, Ohio
 Winters, M., Bartlesville, Okla.
 Wiser, C. R., Chelsea, Okla.
 Wrightsman, C. J., Tulsa, Okla.
 Wyvell, George F., Claremore, Okla.
 Young, L. W., Bartlesville, Okla.
 Young, W. J., Bartlesville, Okla.
 Zevely, E. M., Muskogee, Okla.
 Zevely, J. W., Muskogee, Okla.

p. 73. Oklahoma operators talk of a shut down. Tulsa, Okla., Feb. 6. During the last few days, the principal topic of discussion among oil men has been a shut-down, general or in part. A few are advocating a closing down of all operations, except the running of oil by the pipe line, for a period of one year. A larger number favor the cessation of all new drilling including wildcatting. It would not be at all surprising if some such plan as this is adopted. It is felt that something is almost absolutely necessary to relieve the situation arising from the present overproduction.

There were at the close of January 1909, 1,451 producing wells in the Gleen Pool, including the north extension. The average production per day for the month was 47,214 barrels. This is a decline of 5,522 barrels from December. This is easily accounted for by the cold weather that prevailed, and the windstorm that came shortly before the end of the month and by which more than 400 rigs were disabled or blown down. The average daily production per well for the month is figured at 32 barrels.

p. 88. Notes. M. Benedum of the Benedum-Trees Oil Company is quoted in dispatches from Shreveport, La., as saying that his company has acquired control of the various gas properties of the T. N. Barnsdall interests in the Caddo District, and will furnish gas to various towns, among them Marshall, Texas.

Vol. 7, No. 18, Feb. 20, 1909, p. 5-6. Facts about production and Indian royalties. Dana H. Kelsey, United States Indian Agent at Muskogee, has an interesting chapter in the annual report of the Commissioner for the Five Civilized Tribes for the year ending June 30, 1908. The report shows that there had been a total of 17,428 oil and gas leases filed, of which 9,647 have been approved by the department. A total of 5,424 have been disapproved, and 512 are pending before the department. The royalties and rents collected the past fiscal year were more than those collected during all the previous fiscal years.

Fiscal Year	Collected	Disbursed
1904	\$ 1,300.00	
1905	91,624.40	
1906	323,555.40	
1907	775,489.15	\$ 679,34.45
1908	<u>1,692,627.55</u>	1,685,675.26
Total	2,884,596.50	

p. 25. Notes. The Lewisville Oil and Gas Company has been organized at Lewisville, Arkansas, with a capital stock of \$50,000, of which \$2,000 has been subscribed. The purpose of the organization is to develop the oil and gas prospects near Lewisville, which is 40 miles north of Caddo. Allen H. Hamiter is president, and W. J. Harrington, secretary, John McMurrrough, vice-president, and H. A. McCants, treasurer.

Vol. 7, No. 19, March 6, 1909, p. 15. Incorporated. Texas. Clem-Ballard Oil Company of Dallas, capital \$20,000. Incorporators, James S. Ballard, A. W. Clem, Thomas R. Tennant. Certificates of dissolution were filed by the Clem Oil Company of Dallas and the Ballard Oil Company of Dallas.

Oklahoma. Aurora Oil & Gas Company, of Tulsa, incorporated with \$5,000 capital stock, by George C. Probst, J. W. Carlstrom, and David M. Hammet.

p. 15. The Clayco Oil & Pipe Line Company is now supplying Henrietta and Wichita Falls, Texas, with natural gas from the Petrolia Field. The company had about 35 connections in each town on February 24, 1909, and is installing new meters every day.

Vol. 7, No. 20, March 20, 1909, p. 9. Oklahomans looking over Mexican oil prospects. The Mexican Herald, published in the city of Mexico City, contained the following on March 13.

A. W. Casey and A. H. Martin, of Gotebo, Okla., are at the Grand for a few days. Mr. Casey is a banker and is heavily interested in oil lands south of Tampico. This is his third trip to the republic, but until now he never came as far south as Mexico City. Mr. Martin is engaged in banking and stock raising,

and came down with Mr. Casey for the purpose of investing some money in oil lands. Both have operated in the oil section of Oklahoma for several years. They told the Herald last night that the oil field between Tampico and Vera Cruz was one of the most promising on the continent. They like Mexico City, and may spend several weeks sightseeing, making a number of side trips.

p. 17. Incorporated. Texas. Como Development Company of Como, \$10,000 capital stock. T. Coleman, Sulphur Springs, Texas, president, W. H. Attaway, vice-president, B. E. Morris, secretary and treasurer, both of Como.

Oklahoma. The Ebony Oil Co. of Muskogee, capital \$5,000. Incorporators, H. A. Beasley of Bartlesville, S. W. Patton and W. S. Boyd, of Muskogee.

The Wood Oil Co. of Muskogee has been chartered; capital \$25,000. Incorporators, S. T. Mallory, H. J. Connelly, Muskogee; C. T. Shaw, Parkersburg, West Virginia.

The Okla-Tulsa Oil and Gas Company of St. Louis, has been granted a permit to do business in Texas. John D. Porter, of Tulsa, is named as state agent.

p. 17. Notes. The Navarro Refining Company is taking right-of-way for a gas line from Petrolia, Clay County, Texas, to North Fort Worth. This company has been granted a franchise to supply North Fort Worth with natural gas.

Vol. 7, No. 21, April 6, 1909, p. 5-6. Madill gets in the spotlight. Madill shallow well came in flowing. Tulsa, Okla., April 2. The Mal-Millan Oil Company's fifth test on the Jeff Arbuckle Farm, SW-1/4 sec. 25, T. 5 S., R. 5 E., a mile and a half southeast of Madill, Marshall County, Oklahoma, and about 25 miles north of the Red River, developed into a flowing well on March 22, with an initial production of 1,000 barrels or better. It is less than 500 feet deep, and within a week it had dropped down to 100 barrels. At last accounts it had been shut in. The oil tests 44 degrees Beaume, or better, fresh from the well, and when corrected to temperature, is about 42. It was turned into a ground reservoir, for temporary storage, and pipe was ordered for a four-inch line to the main line of the Red River Division of the Frisco Railroad at Madill. The Texas Company's 8-inch trunk line from Oklahoma to Texas passes within 25 miles of the well. If sufficient production is developed to make it worth while, this company will be in position to lay a lateral and take the oil. President J. S. Cullinan, of the Texas Company, was among the visitors to the field this week.

Thirteen or fourteen test have been drilled at Madill in the last three years. Two of these were deep tests, one being a mile southeast, and the other a mile and a half northwest of the well. Eleven or twelve shallow tests have been put down on the Mal-Millan Company's land and the territory adjacent to it. Three of these are small producers, good for a few barrels, and one of them is rated a 1,000,000-foot gasser. The oil in all of them is high-grade, and comes from a sand and pebble or gravel formation found below 460 feet, and variously reported to be 15 to 25 feet thick. The old heads who have looked the ground over are inclined to doubt that further drilling in the immediate territory will develop more wells like the one which has attracted attention to the field. They regard it as a sort of freak, but the general topography of the country around Madill is regarded as favorable to oil development, and it seems probable that the territory will be thoroughly tested.

The new well, like the others in this district, was drilled with a rotary machine. It was completed Saturday night, March 20, 1909, and showed little oil. On the following Monday morning, the casing was pulled, and the hole was bailed and swabbed. As soon as this was done, a heavy flow of oil started. It was allowed to run into a hastily constructed ground reservoir, to tankage having been provided. No record, or log, of the well was kept by the company. The oil is opaque and dark green. It has a strong kerosene odor and evaporates rapidly. It is said to be the highest grade of crude that has been discovered in the Oklahoma fields.

The other four wells drilled by Mal-Millan Company are on the west line of the SW-1/4 of section 25, and are light producers, running from 5 to 20 barrels. The new well is one location east of the one farthest south of the four wells on the west line of the 80 acres. The sand in all the wells was

found at about the same depth, and the quality of the oil in all the wells is the same.

News of the flowing well spread very rapidly, and oil men from many parts of the country began to flock into Madill early last week. Among them were representatives of The Texas Company, the Gulf Refining Company, the Prairie Oil and Gas Company, the Producers Oil Company, the Sun Company, the Paraffine Oil Company of Beaumont, the Heywood Oil Company of Beaumont, and others, and also many individual operators. Among those who have been there are J. R. Sharp of the Producers Oil Company, C. E. Morgan of the same company, J. Edgar Pew and M. M. Doan of the Sun Company, W. M. Babcock of the Paraffine Oil Company, H. B. Goodrich, manager of the fuel oil properties of the Santa Fe with headquarters at Ardmore, 18 miles west of Madill; J. E. Tomlinson, A. G. Reed, R. D. McCully, M. Moran of The Texas Company, James McFall, R. O. Jackson, Joshua Bailey, T. E. Rorie, all of Tulsa; H. W. Greene, D. S. Greene, C. J. Greene, J. D. Clark, C. S. Kunny, George Emerson, L. P. Clark, C. S. Maloney, Eugene Wilkerson, R. J. Taylor, all of Nowata; John Barrett and E. J. Humphrey of Claremore; George W. Fellers and O. Thompson of Neodesha, Kansas; A. C. Deer and George Newton, of Independence, Kansas; Dr. P. P. Truehart and Dr. C. E. Johnson, of Sterling, Kansas; M. W. Bahan, D. S. Blackburn, and Wesley Sturm, of Corsicana, Texas; Charles A. Lockard, A. A. Kinney, J. H. Hilland, J. C. Pogue, Muskogee; S. P. Schenberger and W. W. Woodard, of Houston, Texas; H. A. Weibel of Coffeyville, Kansas; E. H. Galligan, of Okmulgee; Edward Byrd, of Chelsea, Oklahoma; and J. M. Gorham, of Bartlesville, Oklahoma.

Madill has a very fair hotel, but it is taxed to its utmost capacity, and in order to secure rooms, engagements must be made in advance. There is much inquiry for leases, and some have brought \$100 per acre. All the land in the immediate vicinity of the well has been secured by the Mal-Millan Oil Company. Its holdings aggregate 1,600 acres. This company is composed of Madill and Sherman, Texas, people, and takes its name from two stockholders, Mal Dumas and A. J. McMillan. P. U. Cole, of Sherman, is president of the company; William Leslie, of Sherman, vice-president; and James Henshaw, of Madill, secretary. Mr. Arrington, of Madill, is the manager. None of them have had previous experience in the oil business.

Madill Notes. On March 30, 1909, the new well was shut in. It was flowing by heads, and reports say it was about ready to quit. Owing to the volatile character of the oil, the waste from seepage and evaporation in ground storage is very great.

The rig has been moved over to one of the old wells drilled by the company some time ago, and it will be drilled deeper, and swabbed, with the hope that this treatment will make it a good producer.

The Owasso Oil Company of Independence, Kansas, has just completed a dry hole in section 24, T. 5 S., R. 5 E., one mile north of the Mal-Millan well. There are several other dry holes in the neighborhood to the north and west. One of these is but a quarter of a mile north. Two dry holes were drilled in the town limits of Madill, and still another on the railroad a short distance outside of town. The impression is that the pay runs to the south and east of the big well, and there is a scramble to get leases in that direction.

Madill is about 160 miles south, and 35 miles west of Tulsa. The nearest oil development is that at Wheeler, 42 miles northwest, where the Santa Fe has drilled in some 50-barrel wells at a depth around 1,000 feet. Ardmore is the nearest big town in Oklahoma, being about 18 miles west of Madill. Natural gas from the Wheeler Field is piped to Ardmore. The oil found at Wheeler is heavier than that produced in eastern Oklahoma, and is an asphalt product.

C. D. Reeves, formerly of Beaumont, played in hard luck. He went to Madill several weeks ago and got a lease on a 30-acre tract within 300 feet of where the Mal-Millan well was subsequently brought in, and later gave an option on it for \$500. When the well came in, the option was taken up, and it is reported the lease has been sold to the Producers Oil Company for \$5,000.

The half breed and Indian land owners of the Madill country are quite as unreliable and uncertain, as they are in other parts of Oklahoma. This is sorrowfully testified to by at least one oil man who went out among them on a hunt for leases. He was traveling in a spring wagon, and at the distance of ten miles from Madill, rounded up a party of natives who agreed to sign up for some land he wanted, but all of them insisted on riding to town, otherwise it was no go, so he finally sent them away on the spring wagon, and he went

afoot. When he got into town, he had the satisfaction of discovering that his party had fallen into the hands of the Philistines, and had signed up with somebody else.

The town of Madill has had a sudden awakening to the possibilities of the hour, and visitors are having a warm welcome. The town band comes down to the Rock Hotel every day to play, while the guests are at dinner, and last Tuesday night, citizens arranged to give a ball at the hotel in honor of the oil men.

Reports differ very much as to the character and thickness of the sand in the Madill Field. No accurate or trustworthy information on the subject seems to be obtainable. One experienced operator who made a careful study of the situation says there is no sand in the proper sense, but that the oil comes from a sort of conglomerate. He thinks the oil is in reality a distillate that has come from some pool not yet developed.

p. 11. Notes. by John R. Reavis, associate editor. F. A. Leovy, manager of the Oklahoma division of the Gulf Pipe Line Company, has been made president of the Tulsa Country Club, a flourishing organization composed largely of oil men. They have a pretty club house just beyond the northwestern suburbs of the city, and an excellent chef prepares very good dinners for the members and their guests. Some great golf games are played on the club's grounds.

Among the Tulsa oil men who have been down to see the new well at Madill are Martin Moran of The Texas Company, W. H. Mitchell of the Gypsy Oil Company, J. E. Tomlinson and S. P. Schenberger. The last two have acquired leases in the new field.

C. D. Reaves, formerly a well-known operator at Beaumont, has acquired a number of leases in the Madill territory.

The latest news from Madill is that Jim Sharp has fallen in love with the place, has taken a house, and will live there for the present. Mr. Sharp has two or three men on the ground to assist him in getting leases.

p. 23. Incorporated. Oklahoma. Farnham Oil and Gas Company, of Nebraska, named Wils Ridgeway, of Dewey, state agent.

The Stich Oil Company, of Independence, Kansas, named J. M. Givens, of Muskogee, state agent.

Arbuckle Mountain Development Company, of Berwyn, capital \$250,000. Incorporators, W. F. Warren, of Ardmore, J. H. Griffin, G. A. Brock, and A. W. Gaines, of Berwyn.

Regent Oil Company, of Tulsa, capital \$50,000. Incorporators, Arthur B. Reese, J. A. Hull, and W. H. Kiser.

Piqua Oil Company, of Tulsa, capital \$25,000. Incorporators, F. B. Ufer, R. W. Kellough, and G. L. Reed.

Baum Oil Company, of Bartlesville, incorporated with \$10,000 capital stock, by R. G. Adams and R. H. McGarvin, both of Bartlesville, and J. V. McMahan, Anderson, Indiana.

State Oil and Gas Company, of Bartlesville, incorporated with \$15,000 capital stock, by W. J. Livingston, A. J. Callahan, both of Bartlesville, and E. J. Lambert, Independence, Kansas.

Bryan & Cherokee Oil & Development Company, of Cherokee, incorporated with \$10,000 capital stock, by G. A. Kincaid, A. S. Peck, and others.

Hattie Oil and Gas Company, of Bartlesville, incorporated with \$10,000 capital stock, by Bert B. Benefield, H. Morse, and Charles Avery.

Ward Oil & Gas Company, of Chelsea, incorporated with \$10,000 capital stock, by Charles F. S. Hart, Dewey, Okla., Thomas C. Laney, Lima, Ohio, and Harry C. Wieble, Coffeyville, Kansas.

Arthur Oil Company, of Tulsa, incorporated with \$50,000 capital stock, by Arthur B. Reese, J. A. Hull, and W. H. Kiser.

Fox Oil & Gas Company, of Mounds, incorporated with \$10,000 capital stock, by A. L. Funk, Mounds; Robert J. Bloom and George C. Butte, both of Muskogee, Okla.

Ore Hill Oil Company, of Okmulgee, incorporated with \$10,000 capital stock, by John H. Ribold, E. T. McDowell, and R. C. Winslow.

Ryan Oil & Gas Company, of Tulsa, incorporated with \$10,000 capital stock, by Edward C. Ryan, Emma C. Ryan, both of Tulsa, and William C. Christie, New York.

Mingo Oil & Gas Company, of Tulsa, incorporated with \$10,000 capital

stock, by J. M. Clover, R. W. Kellough, and G. L. Reed.

Keith Oil & Gas Company, of Lenapah, incorporated with \$10,000 capital stock, by C. M. and S. E. Keith, and others.

Miscellaneous. The Texas, Louisiana & Arkansas Oil & Pipe Line Company, of Nashville, Tenn., has changed its name to Rodessa Oil & Land Company, and increased its capital stock to \$100,000.

p. 28. Light oil developed at Electra, Texas. George Woodward was in Houston last week and gave out some dope on the discovery of oil in a test well being drilled on the W. T. Waggoner place, about 300 yards from the Ft. Worth & Denver depot at Electra, Texas. At a depth between 500 and 600 feet, a sand 12 to 15 feet thick was penetrated, and from this formation several barrels of 36 gravity oil were baled. The well is being drilled with cable tools, and it is proposed to go deeper. Electra is in Wichita County, 30 miles west of the Clay County oil and gas field. Leases are being taken on land in this territory, and additional drilling is expected to follow.

p. 36. Notes. The test being drilled by A. P. Dyke, eight miles from Hope, Arkansas, was down 525 feet, March 25, with an 8-1/2-inch hole. All the way down, alternating strata of shells or fossils, sand, and different shales were encountered. On March 25, the drill was in water in a dark sand below the shale. The water is to be cased off at once.

p. 36. Wildcat Notes. A showing of oil is reported in a well drilled for J. R. Hughes, a steam laundry, at Hillsboro, Texas.

p. 36. Notes. The Paraffine Oil Company has leased the Eastman Farm near Denison, Texas, and is preparing to drill at once.

Vol. 7, No. 22, April 20, 1909, p. 15. Incorporated. Oklahoma. Sioto Oil Company, of Tulsa, incorporated with \$10,000 capital stock, by R. W. Kellough, J. E. Wade, and Guy L. Reed.

Washita Valley Oil and Gas Company, of Chickasha, incorporated with \$25,000 capital stock by Joel C. Smith, I. H. Harnes, P. E. Perry, and others.

Melvorn Oil Company, of Nowata, capital \$10,000. Directors, H. G. Cheney, G. A. Cheney, and J. Wood Glass.

Brushston Oil Company, of Nowata, Capital \$10,000. Directors, H. G. Cheney, G. A. Cheney, and J. Wood Glass

Johnston County Oil and Development Company, of Tishomingo. Capital \$15,000. Directors, George Vannoy, S. M. Sargent, and C. W. Peavey.

p. 15. Charles Haas has been engaged to drill the test at Marathon, Brewster County, Texas.

Vol. 7, No. 23, May 6, 1909, p. 3-9. Oklahoma oil fields in April, by John R. Reavis, associate editor. p. 6-7. Madill. Three wells have been brought in at Madill within the last few days. That drilled by Weible and Dannenberg, 600 feet south of the Mal-Millan spurter, is dry. A sand was found, but it was wholly unproductive. The new well of the Mal-Millan Company, 400 feet southeast of its good March completion, has a showing of oil in 22 feet of sand. It has been baled and swabbed repeatedly, with the hope of making it flow, but it has, up to this date, refused to do so. It shows very little gas. The owners think it will make a better showing when it is put on the pump.

The test of Hammer and Company, two miles northwest of the Mal-Millan well, makes a light showing of oil that is almost pure kerosene. The oil from the big well tested a little better than 48 gravity when fresh from the well, but this product of the Hammer well goes far beyond that. Just what it would test is not known, for there is not an instrument in Tulsa that can take its gravity. Some of it has been sent to the Gulf refinery at Port Arthur for analysis. It is straw colored, and is almost transparent. Its discovery adds still further to the enigmatical character of this field. They had trouble in setting the casing in this well, and there is a strong flow of water. The owners hope that when the water is finally shut off, they will get better results by drilling a little deeper. Crude of the same high gravity has been found in Clay County, Texas, 100 miles west of

Madill.

The department of geology of the state of Oklahoma made a cursory examination of the Madill Field some months ago, and Mr. Hutchison, the man who did the work, says the formation there is altogether unlike that in the upper Oklahoma fields. There exists there what he calls a Cretaceous overlap, extending up from Texas. This overlap is of the precise thickness of the ground through which they have to drill to find oil. The bottom of the overlap was once the surface of the earth, and it was on this old surface that the oil was subsequently deposited. He says there are no characteristic folds such as are ordinarily found in an oil region, no synclines or anticlines.

Whatever may be the result of the active development now proceeding at Madill, there is a strong belief in some quarters that a profitable field will finally be opened there. The Sun Company, of Beaumont, has leased in the vicinity over 5,000 acres, and J. R. Sharp, of the Producers Oil Company, more than 10,000 acres.

p. 29. Incorporated. Texas. Denison Oil & Gas Co., of Denison, capital \$6,000. Incorporators, E. C. Sturgis, W. B. Munson, J. B. McDougal, and others. Oklahoma. Twin State Oil Co., of Ardmore, capital \$10,000. Incorporators, J. Edgar Pew, Beaumont, Texas, president; M. M. Doan, Beaumont, Texas, secretary; C. A. Ritter, Nowata, Okla., treasurer; N. H. Cole, Nowata, L. S. Dolman, Nowata, and others, incorporators. To develop leases near Madill and elsewhere in Oklahoma.

Poland Oil & Gas Co., of Ardmore. Incorporators, W. P. Poland, president; Joe F. Robinson, vice-president; A. V. Doak, treasurer; George H. Webb, secretary. These with George Dashner, J. B. Spraggins, W. F. Whittington. C. L. Byrne, and Mike Gorman, directors. To develop land on the southeastern outskirts of Ardmore.

Okiany Oil & Gas Co., of Tulsa, capital \$10,000. Incorporators, T. C. Oyster, J. P. Glenn, both of Lexington, Ky., and Charles Richardson, Tulsa.

Albrecht Oil Co., of Tulsa, capital \$50,000. Incorporators, J. W. Albrecht, Gulfport, Miss.; E. J. Slater, E. W. Wells, both of Tulsa, and others.

Milton Oil Co., of Muskogee, Okla., recently incorporated under Tulsa, Okla., with \$10,000 capital stock, will establish plant in Milton, Okla. William S. Harsha, president; W. D. Ford, vice-president; C. L. Stoner, treasurer; J. Erwin Page, Muskogee, Okla., architect and engineer.

Stoker Oil Co., of Muskogee, capital \$10,000. Incorporators, George S. Ramsey, Ed Hirsch, and N. W. Palmer.

Empress Oil Company, of Tahlequah, capital \$25,000. Incorporators, Frank G. Martin, B. P. Martin, both of Tahlequah, and Paul Konz, Independence, Kansas

Mayson Oil Co., of Tulsa, capital \$10,000. Incorporators, H. W. Anders, Tulsa, J. S. Given and P. B. McCoughtry, both of Muskogee, Okla.

Lamar Coal, Oil & Gas Development Co. of Lamar, capital \$10,000. Incorporators, R. F. Powell, W. D. Atkins, H. D. Mitchell, and others.

Okmulgee Pipe Line Co., of Okmulgee, capital \$10,000. Incorporators, R. Hamblen, J. H. Huckleberry, and H. Leever, all of Muskogee, Okla.

Little Diamond Oil Co., of Nowata, capital \$50,000. W. B. Tucker, Coffeyville, Kansas, H. G. Jannett and E. T. King, Nowata, Okla., incorporators.

Charter amended by Richardson Refining Co., of Sapulpa, changed name to Sapulpa Refining Co., and increased capital stock to \$140,000.

Vol. 7, No. 24, May 20, 1909, p. 3. Late news notes from Oklahoma, by John R. Reavis, associated editor. The latest report from the Hammer well at Madill is not favorable. A well is drilling on the SE-1/4 of Section 31, T. 5 S., R. 5 E., and a rig is building on the Katie Ross, about the center of Section 1, T. 6 S., R. 5 E.

p. 15. Incorporated. Texas. Texas Lignite and Oil Company, of Dallas, has filed an amendment to its charter, increasing its capital stock from \$50,000 to \$200,000.

Louisiana. The Arkansas and Louisiana Gas and Oil Pipe Line Co., of Natchitoches, has secured mineral rights in the northern part of the Parish, and expects to sink a well in about sixty days.

Oklahoma. The Big Oil Company, of Sapulpa, capital \$40,000. Directors, B. C. Burnette, J. Bruner, and L. B. Jackson, all of Sapulpa.

Otter Oil & Gas Co. of Chelsea, capital \$10,000. Incorporators, J. S. Swarts,

G. A. Tibbs, and A. E. Paulger.
Prospect Oil Co., of Ardmore, capital \$25,000. Incorporators, J. S. Cadel, J. F. Robinson, Harold Wallace, and others.
Stevirmac Oil and Gas Company, of Sapulpa. Capital, \$25,000.
Incorporators, H. H. McFann, S. S. Owen, and Virgil Hicks, all of Sapulpa.
Niagara Oil Company, of Bartlesville, capital \$150,000. Incorporators, R. J. Johnson and Judge A. E. Carver, of Bartlesville.
Rock Creek Oil & Mineral Co., of Ravia, capital \$26,000. Incorporators, J. E. Williams, Ravia; R. H. Wagoner and A. M. White, Dallas, Texas.
Sweetwater Oil, Gas, Coal, Land, Zinc & Fuel Co., of Sweetwater.
Capital, \$20,000. Incorporators, Frank Banks, J. W. Ginn, Robert Banks, and others.
Ajax Oil Company, of Tulsa, capital \$10,000. Directors, D. R. Fant, J. N. Goodbeck, A. L. Lamb, all of Tulsa.
Oklahoma Oil & Gas Co., of Ardmore, capital \$40,000. Incorporators, S. A. Apple, Roy W. Johnson, Charles Von Weise, and Wirt Franklin.
Marcus Oil & Gas Co., of Henrietta, capital \$4,000. Incorporators, John F. Wise, Joplin, Mo.; Marcus Simpson and E. D. Jones, both of Alluwe, Okla.
Colorado Oil Co., of Muskogee, capital \$10,000. Incorporators, J. C. Culbertson and J. Garfield Ruell.
Maryland Oil Co., of Muskogee, capital \$10,000. Incorporators, J. M. Givens, A. W. Culp, Felix L. Gast, and others.
Bill Riley Oil Co., of Nowata. Incorporators, J. J. Baylor, J. A. Wettach, Joseph R. Ridgers, and others.

p. 25. Operations at Madill, Oklahoma. A test of the crude from the Mal-Millan Oil Company's well at Madill, Okla., made in the laboratory of Dr. David T. Day, of the United States Geological Survey, gave the following results: Unsaturated carbons in the crude, 8 percent; gravity at 60 F., specific .7887, Baume 47.5; oil begins to burn at 65 C. Distillation by Engler's method showed 22 per cent of gasoline from 65 C. to 150 C., and from 150 C. to 300 C., 33 per cent of kerosene, paraffine 7.41 per cent; asphaltum, none.

The Hammer & Michaels well, on the Dungan Whiting lease, two miles west of the Arbuckle Farm, has had considerable trouble with water. The same people are shipping in another rig.

The pipe line from the Arbuckle Farm to the Frisco Railroad, at Madill, is about completed, and the loading rack and siding will be in before the end of the month.

On account of legal complications, the Weible & Denhart Company has moved, compromising with its contestants, from the Derrick lease, south of and adjoining the Arbuckle Farm, to the Lynn lease, about 4 miles west of Madill, and is now drilling on this land.

Sturm & McMillan unloaded their rig and set it up on the Rorie lease, about 2 miles south of Madill and 1-1/2 miles south of the Arbuckle Farm, and work will begin immediately.

p. 25. A. P. Dyke, of Hope, Arkansas, reports his test near that point down 730 feet, in a heavy grayish fine shale, with some fine and hard pyrites. Above this, he drilled through blue and white shales, with some limey substance, through one 3-foot stratum of hard, gray sandstone, and through dark and gray sands, the latter containing fossils. He is drilling with a 6-inch.

p. 25. Notes. Savage Bros. are preparing to drill near Lippton, Arkansas, 7.5 miles north of Texarkana.

Vol. 8, No. 1, June 6, 1909, p. 5-13. Operations and developments in May, by John R. Reavis. Operations in the Madill District. p. 5. June 4. At Madill, J. R. Sharp is starting wells in the center of the Katy Ross lease, Section 1, T. 6 S., R. 5 E., on the Eula Thompson lease, Section 3, T. 5 S., R. 5 E., and on the William Kela lease, Section 4, T. 5 S., R. 5 E. The well in the SE corner of the E. Lynn lease, Section 31, T. 5 S., R. 5 E., is ready to drill in. Nothing new is reported from the Hammer well in the SE-1/4 of Section 22, T. 5 S., R. 5 E. The Mal-Millan people are ready to jump four of their wells with a power line, but

have not got their pipe line and loading rack to the Frisco Railroad completed. Several rigs have been unloaded recently, and more work will be in progress within a few days.

p. 6. Gas found at Porum. A report comes from Porum, a town some distance south of Muskogee, that the well being drilled a mile and a half southwest of there, in Section 10, T. 10 N., R. 19 E., had developed a heavy flow of gas at 1,700 feet. It was estimated by those in charge of the drilling that the well would be able to supply ample gas for the town of Porum, a place of 2,000 population. The Letchers, father and son, of Tulsa, are interested in the well, and they own the townsite of Porum.

p. 7-8. Visit from Standard Oil officials. On Monday afternoon, May 24, a party of Standard Oil officials, headed by John D. Rockefeller, Jr., arrived in Tulsa in a special train. The party consisted of John D. Rockefeller, Jr., of New York, director of the Standard Oil Company; J. E. O'Neil, Independence, Kansas, vice-president and general manager of the Prairie Oil and Gas Company; James Smith, of New York, head of the fuel oil department of the Standard Oil Company; James Kerr, Marshall, Illinois, superintendent producing department of the Ohio Oil Company; H. C. Folger, of New York, director of Standard Oil Company; E. E. Crocker, vice-president of the South Penn Oil Company; C. N. Payne, general manager of the National Transit Company; J. C. Donnell, Toledo, Ohio, vice-president of the Ohio Oil Company; F. H. Hillman, Indianapolis, Indiana, general superintendent of the Ohio Oil Company; George Jones, legal department of the Standard Oil Company; A. C. Bedford, superintendent of the gas interests of the Standard Oil Company; John D. Archbold, of New York, and Allen T. Sole, of Kansas City.

At Independence, Kansas, they were joined by W. F. Gates, general superintendent of the Prairie Oil and Gas Company, and D. C. Stewart, assistant superintendent. E. A. Latimer, division superintendent, and John Manion, district foreman, went up from Tulsa to meet them at Bartlesville, Sunday, May 23, as did George Coyle, division superintendent, stationed at Nowata. From Bartlesville the party drove over into the Osage country. It was raining when they reached Tulsa, and they had a poor opportunity to see the city. Mayor Mitchell and many oilmen went to the train to pay their respects. It was the first time the younger Rockefeller had been in the Oklahoma and Kansas oil fields. Most of the other officials had been here before. Young Rockefeller is a plain, unassuming business-like looking man of thirty-five, and made an excellent impression on those who met him. The party remained on their train in the Midland Valley yards all Monday night, and left early next morning for the Glenn Field. The day was clear and beautiful, and they had a fine opportunity to see that famous district. They visited the Prairie Oil and Gas Company's tank farms in the vicinity, and then proceeded to Muskogee. There they were taken over the city in automobiles, and out into the oil fields. As they were returning to the city, the No. 3 well of Moore, Elyea and others on the Edna Sanders lease, SW-1/4 of Section 34, T. 15 N., R. 18 E., was coming in. The oil first rose in a solid column a few feet above the mouth of the hole, and then shot up through the derrick and over the top, in truly spectacular fashion.

From Muskogee, Mr. Rockefeller and his associates returned to New York by way of West Virginia, and the Prairie Oil and Gas officials returned to their respective posts in the Mid-Continent field. Naturally there has been a good deal of speculation as to the object of the visit of such a large and important party of Standard Oil people at this time. No official announcements have been made that would throw any light on the subject further than the usual pronouncement that it was simply a tour of inspection.

p. 8. Uncle Sam Refinery to start up. Arrangements have been completed for the operation of the Uncle Sam refinery in West Tulsa. This plant was completed more than two years ago, but owing to troubles that came upon the Uncle Sam Company, was permitted to remain idle. It was built by the Warren City Tank and Boiler Company and was equipped in a first-class manner. It has deteriorated some through non-usage, but is now being put in shape and will soon be ready for business. It has a capacity of 600 barrels a day. It is situated on a siding of the Frisco

Railroad and is but a short distance from wells in the Red Fork Field. The plant will be under the management of Mr. Manross, formerly with the Texas City refinery.

p. 9. Extensive leasing in Bryan County. Many oil leases are being taken in Bryan County, Oklahoma. Bryan County is on the south line of the state, directly east of Marshall County, in which the Madill Oil Field is situated. The town of Durant is situated in Bryan County. The recent activity in taking oil leases indicates an extension of the drilling area. The Bryan County Oil Company up to May 20 had taken leases on 4,700 acres. Most of this had been done in a single week. There is a strong belief that a big oil field is going to be opened in the southern part of Oklahoma, and it is an easy matter to start a leading movement in that part of the state.

Vol. 8, No. 2, June 20, 1909, p. 3. Madill well caught fire. Mal-Millan Oil Company No. 7, on the Jeff Arbuckle Farm, SW-1/4 of Section 25, T. 5 S., R. 5 E., a mile and a half southeast of Madill, came in flowing 50 or 60 barrels an hour from the shallow sand at 6 o'clock on the afternoon of June 15, and caught fire from the boiler. It burned until 11 o'clock the next morning, when it was smothered with steam. It was baled, and started flowing again at the initial rate, but after six hours, stopped, and had to be baled again. This operation was repeated a couple of times, resulting in a flow of limited duration. Today it stopped, and baling failed to revive it. There is apparently very little if any gas. The oil is 48 gravity, like that from the first spurter, which was brought in March 22, and comes from the same level, about 450 feet. The new well is one location from the March completion. Its production has been run into ground storage, but additional wooden tankage will be provided, as the loss from evaporation in the ground is enormous.

The casing is being set in the test on the Ida Lynn tract, Section 31, T. 5 S., R. 5 E., four and a half miles west of the Mal-Millan wells on the Arbuckle land. The owners, Frank Ufer and others, think they are at the top of the shallow sand. Three outside tests are drilling in the Madill District, and three more are rigging.

p. 3. Gulf's new pipe line stations. Work is progressing rapidly on the new intermediate stations on the Gulf Pipe Line Company's 8-inch trunk line to Texas. The names of the new stations, and locations, starting at the north end, follow:

Grayson, near Hoffman, on the Missouri, Oklahoma and Gulf Railroad, between Watkins and Chambers.

Ten Mile, on Ten Mile Creek, near Moyers Station on the Frisco, between Chambers and Lenoir.

Saltillo, on the Cotton Belt, between Lenoir and Big Sandy.

Stryker Creek, a point about 15 miles from Jacksonville, and between Big Sandy and Lufkin.

Chester, on the Missouri, Kansas & Texas Railroad, between Lufkin and Sour Lake.

p. 8-9. Notes. p. 9. Charles T. Madison, formerly general manager of the Muskogee Refining Company, has perfected arrangements for the building of a refinery at Fort Smith, Arkansas. It is expected he will get his crude from the Muskogee Field. His shipments will be over the Midland Valley Railroad, which runs directly from Muskogee to Fort Smith.

p. 9. Wildcat Notes. Savage Brothers are down to 450 feet in their test near Ashdown, Arkansas, on the Kansas City Southern Railroad.

p. 18-19. Incorporated. Texas. Greenville Gas Co., of Greenville, \$100,000 capital. Incorporators, W. Williams, J. B. Murphy, and J. H. Morgan. Red River Oil Company, of Paris, Texas, capital \$300,000.

Incorporators, S. J. Wright, president; G. W. Blakenay, vice-president; B. J. Baldwin, secretary-treasurer.

Trinity River Oil Co., of Liberty; capital \$10,000. Incorporators, W. N. Bullard, W. P. Ellison, and C. F. Stevens.

Oklahoma. Columbus Oil & Gas Co., of Sapulpa, capital \$10,000. Incorporators, Frank B. Summers, S. J. Smith, George L. Meyers, John S. Wicks, C. A.

Caughn, John Mohaman, C. C. Don Carlos, and D. A. McDougal, of Sapulpa. Seminole Oil Co., of Oklahoma City, capital \$15,000. Directors, Harry A. Weir, James L. Green, and E. A. Jones.

Vulcan Oil Co., of Muskogee, capital \$25,000. Directors, J. M. Given, J. S. Given, and P. B. McCoughtry.

The Ada Oil and Gas Co., capital \$15,000. Directors, A. L. Beck, F. E. Bowman, S. M. Torbett, J. D. Kinan, and others.

Kate Oil Co., of Okmulgee, \$10,000 capital. Incorporators, A. F. Boone, W. L. McKee, D. C. McKee, and others.

Kokomo Oil Co. of Tahlequah, \$25,000 capital. Incorporators, Frank G. Martin, B. P. Martin, both of Tahlequah, and J. F. Overfield, Independence, Kansas.

Goodwell Oil Co., of Muskogee, \$10,000 capital. Incorporators, H. E. Roberts, L. C. Deicus, and A. M. Moffit.

Oklahoma Drilling Co., of Muskogee, \$10,000 capital. Incorporators, Alex McGilvray, Frank Wolf, and E. B. Miller.

Orel Oil Co., of Henryetta. \$24,000 capital. Incorporators, J. B. Swan, Henryetta; D. A. Bartlett, Marietta, Ohio; and M. J. Bedford, Okmulgee, Okla.

Kenton Oil & Gas Co., of Kenton, \$5,000 capital. Incorporators, L. A. Wikoff, A. S. Palmer, T. H. Rixey, and others.

Woodhull Oil Co., of Bartlesville, \$25,000 capital. Incorporators, C. E. Jennings, J. K. Robb, and John A. Bell, Jr.

Quapaw Fuel Oil Co., of Chelsea, \$15,000 capital. Incorporators, C. R. Armstrong, E. M. Corah, D. E. Kneeder, and others.

Wichita Natural Gas Co., of Wichita, Kansas, will pipe natural gas to supply 6,000 dwellings in Enid, Oklahoma.

Lamont Gas & Oil Co., of Lamont, capital \$5,000. Incorporators, Ed Gille, A. C. Thompson, A. Settengreen, and others.

George Bell Oil Co., of Muskogee, Okla., capital \$12,000. Incorporators, R. W. Leftwich, M. E. Moore, and L. B. Duryea.

Wildrose Oil Co., of Tahlequah, capital \$25,000. Incorporators, Frank G. Martin, B. P. Martin, of Tahlequah, and Earnest B. Huston, Independence, Kansas.

Progress Oil Co., of Chelsea, capital \$30,000. Incorporators, Isaac and David Cohn, Chelsea; W. N. Marcus, Olean, New York.

Talala Oil Co., of Chelsea, capital \$6,000. Incorporators, W. B. Stephenson, E. V. Beedford, and W. W. Lockhart, all of Chelsea.

Miller-Eakins Oil & Gas Co., of Madill, capital \$25,000. Incorporators, A. G. Eakins, Madill; G. D. Miller, W. W. Birgem and M. C. Dorset, of Sherman, Texas.

Ottawa Mining and Developing Co., capital \$100,000. Incorporators, F. L. Williams and F. H. Konoche, Kansas City, Mo., and J. P. McNaughton, Miami.

Oswald, Kemp, and Lewis Silica Co., and Lytton Mineral Co., of Mill Creek, Okla., consolidated as Chickasaw Mineral Oil and Silica Co., T. W. Lytton, president, Tishomingo, Okla.; J. F. Kemp, vice-president; Fred Oswald, general manager, and E. D. Reed, secretary-treasurer.

Muskogee Refining Co., of Muskogee, capital \$250,000. Directors, J. W. Dowd, of Chicago, Ill., John W. Champion and Cal Pursel, of Muskogee.

Maybelle Oil Co., of Muskogee, capital \$40,000. Directors, Robert Wrigley and William Readicker, of Iola, Kans.; F. B. Jackson, of Muskogee, and P. J. White, of Tulsa.

Westchester Oil & Gas Co., of Tulsa, capital \$50,000. Directors, B. Rabinovitz, of Tulsa; L. Klein and A. Shapero of Yonkers, New York.

Modern Oil Co., of Bartlesville, capital \$10,000. Incorporators, A. J. Mortan, J. Freiburger, C. A. Buzzard, and W. G. Flurry.

Deep Fork Oil Co., of Henryetta, Okla., capital \$60,000.

p. 24. Notes. The Texas City Refining Company started running crude at its works at Texas City, Texas, across the bay from Galveston, on June 15. The supply is coming from Chelsea, Oklahoma, by tank cars. The present capacity is 2,000 barrels of crude per day, but the refinery is not running full. The company has increased its capital stock to \$300,000, and will endeavor to place more stock.

St. Louisians, headed by Adolphus Busch, the millionaire brewer, paid \$7,480,000 for 74,000 of the 85,000 shares of the common stock of the Laclede

Gaslight Company, operating the only gas plant in St. Louis, Missouri. The stock was bought from the North American Company. In connection with the purchase it is stated that it is the intention of the Busch-Everett interests, with which Adolphus Busch and August Busch, his son, are identified, to pipe natural gas from the Caddo Field in Louisiana, to St. Louis, a distance of 550 miles. Adolphus Busch put \$1,000,000 into the Laclede deal.

p. 27-28. Oil sands of the Mid-Continent Field. by Roswell B. Johnson. Throughout the Cherokee and Osage Nations, it has been the custom until recently to drill to the Bartlesville sand, and ordinarily, should it be dry, oil or gas sands have not been expected below this horizon...It is desirable that the various sands should be specifically named. The method of naming has been given some attention., with the result that the following rules for naming oil sands are herewith proposed:

1. Any oil sand name which has come into general usage by the drillers will be preferred, no matter what is its origin, provided it is not a very serious misnomer, or likely to lead to serious confusion. Example: Bartlesville, Red Fork, and Glenn sands.
2. When there is very little doubt that a certain oil sand has been given a name by geologists at its outcrop, this name will be used, except where it conflicts with rule 1.
3. Where it is necessary to choose a new name, or one of several, none of which has come into general use, the following rules will be employed:
 - (a). A name which has been proposed in one of the papers widely read by the oil men, against which there is no serious objection.
 - (b). The name of the pool or town or other geographic feature, such as Bartlesville, near which the sand is the most productive sand at the time of naming.
 - (c). When there is no name available from the foregoing rules, the name of the lease or allotment upon which the sand was first discovered, or is markedly productive, unless it is objectionable from awkwardness or lack of distinctiveness. Examples: Barnett and McEwin sand.
 - (d). It is considered unwise to apply the name of the producers or operating parties to a sand, because an operator has so many scattered leases. Nevertheless, where such a name has come into general use, it is here used.

Table of principal formations of norther Cherokee Nation.
The accompanying table gives only a general idea of the interval between the several formations, which of course varies from place to place:

Fields Sand (a sandstone in the Coffeyville formation),	490-500 feet above top of Oswego limestone.
Little Lime (Parsons limestone),	355-385 feet above top of Oswego limestone.
McEwin Sand (a sandstone in the Bandera shale),	325-355 feet above top of Oswego limestone.
Big Lime (Pawnee limestone),	120-200 feet above top of Oswego limestone.
Holland Sand (a sandstone in the Labette shale),	85 to 115 feet above top of Oswego limestone.
Oswego Lime (Fort Scott limestone),	0-70 feet below top of Oswego limestone.
Bixler Sand (a sandstone in the Fort Scott formation),	70-90 feet below top of Oswego limestone.
Barnett Sand (a sandstone in the Cherokee shale),	305-315 feet below top of Oswego limestone.
Bartlesville Sand (a sandstone in the Cherokee shale),	390-425 feet below top of Oswego limestone.
Burgess Sand (basal sandstone of the Cherokee shale),	560-585 feet below top of Oswego limestone.
Mississippi Lime (Boone limestone),	585-785 feet below top of Oswego limestone.
Mounds Sand (Sylamore sandstone),	825-860 feet below top of Oswego limestone.

Vol. 8, No. 3, July 6, 1909, p. 3-9. Oklahoma oil fields in June.
by John R. Reavis, associate editor. p. 8-9. Notes. The Big Chief Oil Company is preparing to drill a second test in the Choctaw Country. D. C. Acosta, of the Mississippi Oil and Gas Company is manager of the Big Chief Company. The first well was drilled last

fall when 500,000 feet of gas was developed. Since that time, the flow has increased to 1,000,000 feet a day. The second well will be in Section 24, T. 7 N., R. 17 E.

p. 15. Pipe for the Fort Worth-Dallas natural gas line. On June 30, the National Tube Company began shipping from its McKeesport mills, the 16-inch pipe for the Lone Star Gas Company's gas line from Petrolia, Clay County, to Fort Worth and Dallas, Texas. The pipe weighs 42 pounds to the foot, and the order is for 125 miles, involving a cost of \$800,000 to \$900,000. The Lone Star Gas Company was chartered in Texas last month, with a capital of \$2,500,000. Right of way for the line was taken some time ago by E. R. Brown, who turned it over to the company when it was organized. The gas will come from the Clayco Oil & Pipe Line Company's wells at Petrolia, which are capable of supplying several times the quantity of gas required by Dallas and Fort Worth. Arrangements were recently effected by which the Lone Star Company will furnish natural gas to the Dallas Gas Company for Dallas.

p. 22. Wildcat Notes. At Henrico, Desha County, Arkansas, a test is being drilled by local parties.

Active leasing is reported near Lipton, Arkansas, where Savage Brothers are drilling.

P. A. Schauman has resumed drilling on his Stuttgart, Arkansas, prospect. It is financed by Shreveport people.

p. 22. Notes. The Texas Company has completed a second 8-inch line across Red River north of Denison, to provide for an emergency as occurred in May, 1908, when the original line was washed out.

p. 23. Incorporated. Texas. The Denison Petroleum Company, of Denison, capital \$6,000. Incorporators, E. C. Sturgis, J. B. McDougall, S. P. Aneker, and others.

The Breckenridge Development Company, of Breckenridge, capital \$30,000. Incorporators, B. S. Walker, S. M. Hanks, of Breckenridge, and G. M. McDonald, of San Antonio.

Oklahoma. The Aydelotte Oil Company of Tahlequah, capital \$25,000. Incorporators, Frank G. Martin, B. P. Martin, of Tahlequah, and Paul Konz, of Independence, Kansas.

Eastern Oklahoma Oil and Gas Company of Spiro, capital \$25,000. Incorporators, John Taylor, W. McCann, both of Spiro, and A. J. Foster, of Bokoshe, Okla.

Toga Oil Company, of Tulsa, capital \$10,000. Incorporators, Cyrus S. Avery, Essie M. Avery, and others.

The Stratford Oil and Gas Company, of Marietta, capital \$35,000. Incorporators, M. G. O'Neil, R. B. Godfrey, L. H. Beech, of Marshall, Texas, and B. V. Cummings, of Waurika, Okla.

Kingston Oil and Gas Company, of Kingston, capital \$35,000. Incorporators, C. H. Byrd, president; E. F. Lewis, vice-president; and T. Armory, secretary-treasurer.

Big Five Oil and Gas Company, of Tulsa, capital \$10,000. Incorporators, S. Avery, Tulsa; Morris F. Knight and John F. Thompson, Vinita, Okla.

Springer Oil and Gas Company, of Ardmore, capital \$5,000. Incorporators, Harrold Wallace, J. Cotner, both of Ardmore, and E. F. Brown, Springer, Okla.

Kee-Too-Wah Oil Company of Tahlequah, capital \$25,000. Incorporators, Frank G. Martin, B. P. Martin, and Paul Konz.

Page & Josey Oil Company, of Tulsa, capital \$10,000. Incorporators, Charles Page, R. A. Josey, and I. L. Greer.

Vera Gas Company, of Vera, capital \$25,000. Incorporators, W. J. Long, James A. Veasey, and L. A. Rowland, all of Bartlesville, Okla.

Hobart Gas and Fuel Company, Hobart, Okla., capital \$10,000. Incorporators, Winfield I. Pryor, Nora M. Pryor, both of Hobart, and William F. Yeakel, Fort Scott, Kansas.

Choctaw Oil and Gas Company, of Guthrie, capital \$7,000. Incorporators, D. C. Acosta, president, and C. W. Deming, secretary-treasurer. Holds leases on 1,000 acres in Pittsburg County.

El Reno Gas, Oil and Development Company, of El Reno, capital \$10,000. Incorporators, A. W. Mason, J. J. Donnell, and T. J. Rasp, all of El Reno.

Vol. 8, No. 4, July 20, 1909, p. p. 3. Water is scarce at Madill. Things are going along slowly here. Scarcity of water has delayed drilling operations. The Continental Oil Company, J. R. Sharp, and others, is down 150 feet in the test on the William Keel, Section 4, T. 5 S., R. 5 E., with an 18-inch hole. The same people have a fishing job at 470 feet in their test on the Katy Ross lease, in Section 1, T. 6 S., R. 5 E. Will Sturm is the contractor on this hole, and he has had trouble almost from the start. The Continental also has a rig up for a test on the Thompson land, Section 3, T. 5 S., R. 5 E., three quarters of a mile northeast of the Keel, but has not begun drilling. E. M. Reise & Company set casing at 470 feet in their test on the Sacre, Section 22, T. 5 S., R. 5 E., and then stuck the baler. Truehart and others, on the William Willis, Section 7, T. 6 S., R. 5 E., are down 200 feet.

The other outside wells are hung up for want of water. The Continental people laid a mile and a half of water line in order to get a supply. The water wagon is too doubtful a proposition to depend on.

On the Arbuckle Farm, the Mal-Millan Company is pumping Nos. 1, 2, 5, and 6, and getting, as near as can be estimated, about 125 barrels, half of which comes from No. 5. This well still makes a flow now and then. No. 7, the latest and best of this company's wells, has a baler and line in it, and no rig over it. The company expects to complete No. 9 this week, and it will then move the rig to No. 7, and go a-fishing. No. 7 was flowing about 100 barrels a day before it got hung up. No. 9 is about 400 feet east of No. 7.

The Aiken well on the Love land, Section 19, T. 5 S., R. 5 E., is shut down for want of water.

About 15 cars of oil had been shipped from the Mal-Millan Company's rack on the Frisco up to July 10. It went to refineries at Corsicana, Oklahoma City, Chelsea, and Okmulgee. This, with the oil used for fuel, and sold to wildcatters, constituted the field's output up to the date given.

p. 8-9. Notes. The last news from the test being drilled at Durant, Oklahoma, was that it was down 1,000 feet, with no showing of oil or gas.

Sam Briscoe is in charge of one of the right-of-way parties working on the route of the Prairie pipe line to Louisiana. Mr. Briscoe has five men in his party, and they have just finished their work across Okmulgee County. Other parties are working farther down the line.

p. 9. The decision in the Oklahoma gas case once more invites attention to the natural gas resources of the state. In their opinion, Judges Pollock and Campbell refer to the fact brought out in the proceedings of the case that the amount of gas now available in the state is in excess of one billion cubic feet per day. The Oklahoma Natural Gas Company, of Tulsa, has control of 300,000,000 cubic feet per day. Perhaps the largest single owner of gas in the state is the Indian Territory Illuminating Oil Company.

The Okla Oil Company will immediately install a natural gas system for the town of Haskell, on the Midland Valley Railroad between Tulsa and Muskogee. The company has its own gas wells near the town.

p. 9. Wildcat Notes. Savage Brothers are down below 800 feet in the test at Lipton, Arkansas. The drill is in a hard formation.

Brown Brothers are drilling a test for W. D. Chew and others of Eldorado, Arkansas, on the Carter Farm near Port Caddo, Texas, 14 miles southwest of Lewis, Louisiana, and across the state line west of the Caddo Field. The location is 3 miles east of the M. K. & T. Railroad.

p. 11. Notes. George Woodward, of Electra, Texas, was in Houston this week. Ben Harper visited George at Electra several weeks ago, and George says he became imbued with the idea that he could find oil thereabouts. So we expect to hear any day now that he has checked his little rotary to Electra.

p. 19. Incorporated (p. 18-19). Texas. Buzzard Springs Oil & Gas Development Co., of Dallas. W. H. Gaston, president.

Texarkana Gas and Oil Company, of Texarkana, capital \$100,000. Incorporators, J. E. Morris, M. D. Tilson, J. E. Blackburn.

Oklahoma. Kreps Oil & Gas Company, of Tulsa, \$10,000 capital. Incorporators, R. H. Shrewsberry, R. P. Elliott, and W. H. Reece.

The Bristol Oil Co., of Muskogee, capital \$5,000. Incorporators, J. G. Huber, A. W. Culp, and H. H. Galbraith.

The Gourd Oil and Gas Co., of Nowata, capital \$9,000. Directors, F. W. Galer, H. W. Reed, F. S. Rowe, and B. G. Dowell.

The Min-Nell Oil and Gas Co., of Nowata, capital \$9,000. Directors, F. W. Galer, H. W. Reed, F. S. Rowe, and B. G. Dowell.

West Penn Oil & Gas Co., of Okmulgee, \$10,000 capital. Incorporators, W. E. Wood, E. W. Gill, and B. T. Buchanan.

Cody Creek Pipe Line Co., of Muskogee, \$5,000 capital. Incorporators, J. H. Huckleberry, A. W. Culp, H. H. Galbraith, and J. W. Beverly.

Erick Oil, Gas, & Mineral Co., of Erick, Okla., \$10,000 capital. Incorporators, H. Ward, E. M. Green, J. W. Team, and others.

Shippen Oil Co., of Muskogee, \$10,000 capital. Incorporators, G. J. Kobusch, Edward Gorse, both of St. Louis, Mo.; and Charles A. Weis, Muskogee, and others.

Enterprise Oil & Gas Co., of Okmulgee, \$10,000 capital. Incorporators, L. V. Dick, J. M. Jighn, and W. T. Newman.

Chelsea Tank Line Co., of Chelsea, \$15,000 capital. Incorporators, C. R. Armstrong, L. R. Armstrong, and E. M. Corah.

Rock Creek Oil & Mineral Co., of Ravia, capital \$25,000. Incorporators, E. W. Rose, president-treasurer, Dallas, Texas; A. M. White, vice-president and manager, Ravia, Okla.; R. H. Waggoner, secretary, Dallas.

p. 20. A railroad man's story of petroleum. "Petroleum, its origin, production, and history" by Eugene McAuliffe, in the June number of the Rock Island Employes' Magazine. Mr. McAuliffe is the general fuel agent of the Rock Island-Frisco system... My hat is always off to John D. ... Now whole families stay out until three in the morning riding automobiles propelled by gasoline power. (preface)

After reviewing the available facts as to the early uses of petroleum, Mr. McAuliffe passes on to the utilization of oil for fuel. He gives credit to Russia for first employing it to fire locomotives and steam vessels. The Frisco system he says was one of the first roads in the west to equip locomotives to burn fuel oil, and is perhaps the greatest consumer outside of the Russian railroads. The Southern Pacific, Santa Fe, Atlantic and Pacific Railroads consume about 35,000 to 40,000 barrels of fuel oil per day. He gives an account of the history and development of the Mid-Continent and Texas fields.

The average mileage was 19 miles per ton of fuel in 1908 and 1909, or 20 pounds of fuel per passenger per mile, for passenger trains. For freight trains, the average was 10 miles per ton of fuel.

p. 20. The Texas Company establishes offices in London. The Texas Company opened offices in London, England, on Billiter Street, in the Billiter Building. Previously, the company established a continental office at Antwerp, Belgium, through which its whole European business was transacted. Mr. R. Miglietta is the new superintendent in London. He was with the Texas Company at Beaumont, Texas, before going to Antwerp.

p. 20. Petrol butter is the Standard's latest. A special from Alton, Ill., on July 11, says: The first roll of petroleum butter, the Standard's latest product, is to be turned out at the Wood River refinery, near Alton. It is said to be of the same consistency as lacteal butter, but brown in color. It lasts a great deal longer than real butter, it is said, and does not become rancid.

p. 22. Pipe lines and rumors of pipe lines. A permit has been granted the Prairie Oil & Gas Company by the Interior Department, to lay a pipe line over Indian lands, from the Glenn Pool to the Arkansas state line. Men are in the field taking right-of-way over private land. County commissioners have given permission to the company to lay its line along the public roads.

Construction on the south end started last month. Some five miles have

been laid from the station at Cut-off Switch, near Shreveport, north toward Uni. Steel tanks are being built at Cut-off. Twenty miles of 8-inch will eliminate the gap between Cut-off and Uni. It is only a mile or two from Uni to production in the Caddo Field, the nearest wells being in Section 10-20-15. A short lateral will reach the field, and the Standard will have storage ready at Cut-off for its Caddo runs.

Work is progressing rapidly at the refinery site, north of Baton Rouge. Pending the completion of the pipe line, crude will be shipped in tank cars from Oklahoma and Caddo, to storage at Baton Rouge. The Standard has bought 65 acres of land at Chalmette, south of New Orleans, for a fuel oil storage and distribution station. There is a steel tank on the property, built for the New Orleans Terminal Company, but never used. The Standard will go after the rich fuel oil business in the lower Mississippi valley. The Prairie Oil & Gas Company has many millions of barrels of crude in storage in Oklahoma, and it seems reasonable that this will be drawn on to supply the Baton Rouge refinery, which will handle 15,000 to 20,000 barrels of crude a day. A large portion will go into fuel oil. There is a market in Louisiana for 10,000 to 15,000 barrels of fuel oil a day. The present production of crude in Louisiana is less than 9,000 barrels per day, of which 1,500 from the Caddo Field is reserved for refining. Most contracts are for one year, and it is reasonably certain that Standard will offer fuel consumers longer term contracts, making fuel oil cheaper than coal, which comes from Tennessee and Alabama.

Vol. 8, No. 5, Aug. 6, 1909, p. 3-11. Oklahoma Oil fields in July, by John R. Reavis, associate editor. p. 8. Operations at Madill. Late reports from Madill show nothing new in the situation there. The Continental Oil Company's fishing job on the Katy Ross, Section 1, T. 6 S., R. 5 E., is still on. Truehart and others on the William Willis farm, Section 7, T. 6 S., R. 5 E., were drilling at 600 feet on July 31, and had failed to find the Arbuckle sand. The Continental Company was down 400 feet with 13 5/8-inch pipe on the William Keel lease, Section 4, T. 5 S., R. 5 E., and the same company's rig on the Thompson lease, Section 3, T. 5 S., R. 5 E. was idle. E. M. Riese & Company, on the Sacre lease, Section 22, T. 5 S., R. 5 E., after waiting a week for pipe, resumed drilling at 600 feet. They did not find the Arbuckle sand, and have been in black shale without a break for 200 feet. Aiken and others, on the Love lease, Section 19, T. 5 S., R. 5 E., were shut down July 31, waiting for water. Mal-Millan No. 9, on the Arbuckle, near the producing wells, did not show anything at the proper depth, but after standing a few days, made some gas, and the drillers are going back into it, hoping to make a well. Coffeyville, Kansas people, who have been drilling at Lynn Post Office, 10 miles southeast of Madill, are shut down at 500 feet. The Mal-Millan people in the last two weeks have loaded out a few cars of oil consigned to refineries.

p. 10. Notes. The Quintuple Oil Company, of Pittsburgh, Pa., has been chartered in West Virginia, to operate in Oklahoma. The capital is \$100,000, and the incorporators, John Eaton, Louis C. Sands, Louis Brown, Harry A. Boschert, and George L. Roberts, all of Pittsburgh.

Hammar and Michaels have taken a contract to drill a test well east of Marietta, Oklahoma, for Max Westheimer, Dr. von Keller, and P. C. Dings, of Ardmore, and Simon Westheimer and others of Marietta.

Oil has appeared in a water well at the city waterworks at Roff, Oklahoma, rendering the water unfit for use, and the town is jubilant over oil prospects. The Dallas News correspondent at Roff says the people are now convinced that they are "in the midst of an oil field".

A press dispatch from Lawton, Oklahoma, says the J. S. Dannick Gas Company found 18 feet of gas sand at 700 feet in its test near Lawton. The well will be drilled to 2,000 feet, if a good flow of gas is not encountered above that depth.

James McFall, of Tulsa, has taken the contract to drill the first test for the Ada Oil and Gas Company, near Ada, Oklahoma.

p. 19. Incorporated. Oklahoma. Producers Oil Reduction Company, of Muskogee, capital \$12,000. Directors, Max E. Moore, Louis B. Elyea, Ralph W. Leftwich, Charles T. Madison, and H. G. Baker, all of Muskogee. Purpose, the reduction of crude to fuel oil.

Kenton Oil & Gas Co., of Kenton, capital \$5,000. L. A. Wykoff, president; A. S. Palmer, vice-president.

Queen City Development Co., of Oklahoma City, capital \$5,000. Incorporators, J. S. Anderson, B. L. Woodworth, and R. A. Nelson, all of Oklahoma City.

Ruffen Oil and Gas Co., of Muskogee, capital \$10,000. Incorporators, K. S. Weeks, John L. Weisner, J. Scott, and George T. Biglow, and Harrietta G. Weeks, all of Muskogee.

Tuma Creek Oil Co., of Sapulpa, capital \$10,000. Incorporators, W. A. Bovaird, A. R. Davis, W. Bovaird, and others.

Western Oil Station Co., of Sapulpa, capital \$5,000. Incorporators, W. R. Douglas, J. Harvey Smith, both of Sapulpa, and W. J. Collier, Tulsa, Oklahoma.

p. 22. Good chance to assist in development. I have six-inch casing set to the entire depth of my oil and gas well, which is now 1,010 feet. I have passed through various strata of shale, grayish sands, and hard gray sandstone, some fossils, and shell limestone, and am now drilling in dark shale, with fine pyrites and some fossils. I will drill this well to 1,200 feet, and place six-inch casing to the bottom, and give reliable party one-fourth interest in 1,500 acres of leases on which the well is located, and also will give leases on my own land of 240 acres, commencing within 200 yards of the well, and 500 acres of leases nearby if he will complete the well to 1,800 feet, providing he does not strike oil and gas in paying quantities at a less depth, and provided I do not strike oil or gas before I reach the depth of 1,200 feet. I will give this chance now, or will do so when I drill to 1,100 feet. The well is not quite a mile from station. Come or address A. P. Dyke, Hope, Arkansas. July 29, 1909. P. S. - Hope has 5,303 inhabitants, four railroads in daily operation, and one other building.

p. 23. Good producer at Petrolia. At Petrolia, Clay County, 4 wells were completed in July, 2 being oil and 2 dry. The Palmer Oil Company's No. 1, on the Lockridge lease, completed July 19, is pumping better than 100 barrels. It is about 735 feet deep. Navarro Refining Company 6 on the Smith & Avis lease, is credited with 8 barrels initial output. Navarro Refining Co. 7, on the Smith & Avis lease, and 8, on the Carrow lease, were dry.

Pipe has arrived for the Lone Star Gas Company's 16-inch line from Petrolia to Fort Worth and Dallas, and the work of laying it will be well under way before the end of the month. It is understood that The Texas Company, which also proposed to lay a gas line to Fort Worth, has completed the taking of right-of-way, and will soon make a move toward actual construction.

p. 28. Wildcat Notes. A showing of oil at 500 feet is reported on the Turney ranch, the property of W. W. Turney, 35 miles south by southwest of Marathon, Texas. Allan Burnam was drilling the hole for water.

Vol. 8, No. 6, Aug. 20, 1909, p. 5. Madill. Results at Madill during the last two weeks have not been encouraging. The Mal-Millan Company, drilling on the Arbuckle Farm, near the producing wells, got a dry hole in No. 9, and then moved over to No. 8, and got the same. No. 10 is drilling. The producing wells on the Arbuckle are said to be averaging 125 to 150 barrels a day, some of the output being used for fuel on the field, and the remainder going in tank cars to refineries. The Continental Oil Company is below 500 feet, with 13 5/8 - inch pipe on the William Keel lease, Section 4, T. 5 S., R. 5 E. The same company finished its fishing job on the Katy Ross land, Section 1, T. 6 S., R. 5 E., and set casing at 500 feet. E. M. Riese & Company, on the Sacre Farm, Section 22, T. 5 S., R. 5 E., are below 800 feet and still in black shale with no showing. Truehart and others on the William Willis, Section 7, T. 6 S., R. 5 E., are fishing below 600 feet. Aiken and others, on the Love lease, Section 19, T. 5 S., R. 5 E., are still shut down, waiting for water. The several outside wells have gone past the proper depth for the Arbuckle sand without finding it.

p. 7. Mr. Hutchison on petroleum possibilities of Madill District. L. L. Hutchison, assistant director of the Oklahoma Geological Survey, spent August 11 in furthering some investigations into the mineral resources of Marshall County, and that night delivered to the citizens of the county at Madill a lecture on

the mineral resources of Oklahoma and Marshall County.

Relative to the oil and gas possibilities of this locality, Mr. Hutchison said in part: "The Marshall County oil field has always been of great interest to me from a geological standpoint. Oil and gas occur here under geological conditions different from those of any other part of the state, for they are found near an unconformity between the rocks of Pennsylvanian age and those of the Cretaceous age. That is to say, at the close of Pennsylvanian times, the sea receded and left the old sea bottom as a land surface for a very long time, then finally the sea encroached from the south, and several hundred feet of sediments were deposited on the old land, so that what was the land surface for centuries, now lies buried 450 feet beneath us. The oil and gas occur in pockets of gravel and coarse sand near the contact between the old and the new rocks. This makes it impossible for a geologist to determine the most probable place to drill. The color, character, and fossils of the rocks of Marshall County have always caused me to have confidence in the petroleum possibilities of the region, even before previous drilling, and we expect to see the time when Marshall County shall contain larger paying developments than now. I wish to drop one word of caution: the sedimentary rocks thin out as one goes northward, until we reach the granite near Teller. Pay oil has never been found in granite, nor will it be."

p. 15. Incorporated. Oklahoma. Pitman Oil Co., of Chelsea, capital \$10,000. Incorporators, J. O. Pitman, C. F. Martin, and C. H. Armstrong.

Pascora Oil Co., of Muskogee, capital \$5,000. Incorporators, W. F. Smith, J. F. Mooley, and George D. Rodgers.

Dudley Oil & Gas Co., of Tulsa, capital \$10,000. Incorporators, George B. Harmon, E. F. Blaise, and C. C. Simmons.

Arkansas Valley Oil and Gas Co., of Muldrow, capital \$50,000. Incorporators, W. M. Blackard, of Muldrow; R. J. Tallman, W. L. McGee, of Fort Smith, Arkansas.

Regal Gas Co., of Muskogee, capital \$20,000. Incorporators, H. R. Denton, Muskogee; L. A. Lockwood and E. J. Lamber, both of Independence, Kansas.

Washita River Oil, Gas & Mineral Co., of Ravia. Incorporators, Z. T. White, W. E. Underwood, both of Ravia; A. M. White, Dallas, Texas, and others.

Gem Oil Co., of Vinita, capital \$10,000. Incorporators, J. M. Jones, Amos Stoalabarger, C. R. Holloway, and J. J. Robinson.

Miscellaneous. Lipton Oil, Gas, Pipe Line and Mineral Company, of Lipton, Arkansas, capital \$50,000. Charles A. Orleans, president; Charles A. Hartwell, vice-president; Joel D. Conway, secretary; Jesse S. Savage, treasurer; William A. Savage, general field manager.

p. 22. Test Wells. At Lipton, Arkansas, near Ashdown, on the Kansas City Southern, Savage Brothers have their test down 1,000 feet or deeper, and it is reported that they are trying to get more land near the well. Secrecy is being maintained by them as to results, and scouts who nose around too close are chased off the lease.

The Producers Oil Company last month shipped a rig to Naples, Texas, 40 miles west of Texarkana, where a test is being drilled by this company and local people.

Brown Brothers are drilling a test for W. D. Chew and others of Eldorado, Arkansas, on the Carter Farm, 14 miles southwest of Lewis, Louisiana, and about 10 miles west of the Caddo Field. The location is known as Port Caddo, and is in Texas.

p. 22. California fuel oil for the navy. Extensive tests made at both the Mare Island and the Puget Sound navy yards, as to the relative values of California fuel oil and Puget Sound coal for the navy, have resulted in a big showing for oil in the way of economy. Oil is being used in the shops on Mare Island, and has been given a test on the monitor Cheyenne, with excellent results. Tentative plans have been prepared by the bureau of navigation for the establishment of fuel oil depots. It is proposed, in a general way, to have liquid fuel stored wherever there is now a coaling station. This would result in establishing such liquid fuel depots at Puget Sound, San Francisco, and San Diego, on the Pacific Coast, and also at Honolulu, Guam, and probably at Cavite or Manila.

Eventually there will be oil ships, just as there are now colliers. In

fact, plans have been prepared for converting coal barges into oil barges. It is intended to ask Congress for funds to build ships to carry liquid fuel.

Vol. 8, No. 7, Sept. 6, 1909, p. 7-8. Madill. E. M. Riese & Company have quit and pulled out on the Sacre lease, Section 22, T. 5 S., R. 5 E., at Madill. They went about 1,200 feet and stopped in the black shale in which they had been drilling for 600 feet or more. Nothing of interest has developed in the field, operations being greatly retarded by lack of water. The Mal-Millan Oil Company, owning all the producing wells, has sold its output for 12 months to the Oklahoma City Refining Company, McKee & Todd, at 53 cents on board cars. The Oklahoma City refinery is getting the bulk of its supply of crude from Catoosa, Muskogee, and the Glenn Pool. It is using about 3,000 barrels a week.

p. 8. Notes. Four or five tests are to be sunk near Lawton, Oklahoma. One will be at Hastings, another at Marlow, and two between Hastings and Lawton. The finding of gas near Lawton has encouraged further prospecting.

The Uncle Sam Refinery at West Tulsa is now in operation. A supply of crude is being obtained from the F. A. Baker properties at Red Fork, two miles distant. The contract calls for 15,000 barrels a month. The Uncle Sam Company has bought 13 acres of land at Armourdale, Kansas, opposite Kansas City, Mo., and will consolidate its Atchison and Cherryvale refineries at this point.

E. Constatin, trustee, of New Orleans, is operating the Tulsa Refining Company's plant at West Tulsa. Crude is being obtained from Muskogee, and the runs average 1,200 barrels a week.

After a hard scrap, in which the Cleveland-Bermudez people made the fight, C. F. Ireland was awarded the second contract on August 24, for the paving of Tulsa streets with Texaco asphalt. The two contracts aggregate 126,000 square yards, covering 115 city blocks. The price on the second contract is \$1.78 per square yard. When Texaco asphalt was attacked by the Trinidad concern, as being untried and unknown, Mr. Ireland chartered a special car and took a party of Tulsa's leading property owners to Muskogee, where Texaco was used to pave over 100 city blocks last year, and where 20,000 yards of this material is now being laid.

O. W. Compton has returned to Tulsa, after spending the summer in the east. He motored from Buffalo to St. Louis in his Thomas Flyer, making the trip leisurely, and visiting Detroit, Kokomo, Cleveland, Toledo, and Indianapolis en route. He was four weeks covering the 2,500 miles, including side trips and stops. The roads were fine all the way, excepting out of Cleveland to Lorain. The car came through without requiring repairs of any character. At St. Louis, Mr. Compton and his wife and child who accompanied him, took the train for Tulsa, shipping the car from that point by freight.

p. 20. Oil Investor's Journal. Eighth year. Subscription \$4.00 a year.

p. 20. The Fiftieth anniversary of Drake's discovery. Commemorating the fiftieth anniversary of the finding of oil by Edwin Laurentine Drake, in Venango County, Pa., a banquet was held at Titusville, Pa., on the evening of August 27. Citizens of Titusville and invited guests participated, 200 in all being present. Rev. John M. Critchlow was toastmaster, and responses were made by Arthur L. Bates, Colonel P. C. Boyle, E. T. Hall, T. B. Westgate, M. N. Allen, Major A. C. Hawkins, George Bryan, and Samuel Grumbine. George C. Priestley, of Bartlesville, Oklahoma, was among those present from a distance. On the morning of the same day, the Oil City Derrick issued a special 16-page anniversary edition, replete with history of the first oil strike, statistics of the industry from the beginning down to the present time, and many other features.

p. 20. Sudden death of F. O. Barstow. Frank Q. Barstow, a director and member of the executive committee of the Standard Oil Company, died suddenly on a train early Friday morning, August 20, while en route from Alexandria Bay, Thousand Islands, to his home at East Orange, N. J. He had been suffering from valvular disease of the heart for 18 months, and had retired from active business a year ago. The body was sent to East Orange, where his widow and two sons, William A. Barstow

and Buhner Barstow, reside, and the funeral took place from the home. Mr. Barstow was in his sixty-fourth year. He was born in Cleveland, Ohio, and entered the oil business in the early 70's. He was a strong and active figure in the affairs of the Standard, and had important interests in manufacturing and mining.

p. 28. Wildcat Notes. A test is being drilled about two miles from Idabel, McCurtain County, Oklahoma.

Vol. 8, No. 8, Sept. 20, 1909, p. 6. Madill. A deal was made early in the month for the sale of the Mal-Millan Oil Company's property at Madill, to Sterling, Kansas, people, represented by Truehart and others of the Kansas Southern Oil Company. The Mal-Millan people have nearly 2,000 acres of land, and seven wells which have produced intermittently. It is stated that only one of these is now on the producing list, making 15 to 25 barrels a day. At last accounts, the deal had not been closed. Drilling operations at Madill are slow, due to the continued drouth.

p. 15. Incorporated. Texas. Castles Oil Company, Corsicana, capital \$24,000. Incorporators, T. P. Kerr, Mrs. C. M. Castles, and A. W. Hamill. Oklahoma. Bay Oil Company, of Bartlesville; capital \$10,000. Incorporators, W. G. Furry, Frank G. Finney, and Thomas F. Gorman.

Webb Oil Company, of Muskogee, capital \$10,000. Incorporators, M. E. Moore, R. W. Leftwich, and L. B. Elyea.

Gaston Oil Company, of Nowata, capital \$100,000. Incorporators, John H. Gaston and J. W. Halsell, of Dallas, Texas; W. A. Chase, Nowata, Okla.

Cyclone Oil Company, of Muskogee, capital \$12,000. Incorporators, M. E. Moore, R. W. Lerftwich, and L. B. Elyea.

McAlester Oil and Gas Company, of McAlester, capital \$12,000. Incorporators, W. B. Riley, G. L. Miller, J. H. Gordon, of McAlester.

Mook Oil and Gas Company, of McAlester, capital \$50,000. Incorporators, E. Allan Boyd, William H. Moore of McAlester; W. A. Hinchman, of Kansas City, Mo.

Wayne Oil and Gas Company, of Muskogee, capital \$30,000. Incorporators, George Robinson, E. J. Lambert, of Independence, Kansas, and H. R. Denton, Muskogee.

Moore Gas Company, of Nowata, capital \$20,000. Incorporators, M. R. Moore, E. C. Pollard, F. W. Galer, of Nowata.

Flora Oil & Development Co., of Hugo, capital \$25,000. Incorporators, Fred Krey and L. A. Engel, both of St. Louis, Mo.; Carl Krauber, and others, Hugo, Okla.

McGee Valley Oil Co., of McAlester, capital stock \$100,000. Incorporators, Arnold C. Spaortas, New York, N. Y., J. E. Cavanaugh, and J. C. Wilkinson, both of McAlester.

Tamaha Oil Co., of Tamaha, capital \$16,000. Incorporators, B. J. Sowers, J. C. Terrell, and W. W. Fisher, all of Tamaha, and others.

Texola Company of Tulsa, capital \$10,000. Incorporators, S. D. Felt, Charles Richardson, and W. H. Cunningham.

p. 20. An argument for oil fuel in the navy. An Associated Press dispatch, dated September 10, from Honolulu, contains one of the best boosts for fuel oil that ever got past the pro-coal news censors of the navy department. It follows:

"The Tennessee, flagship of the Pacific fleet, has broken all records for the journey between San Francisco and Honolulu, making the voyage in four days and seventeen hours. The Colorado and West Virginia could not keep up with the 18-knot pace set by the flagship soon after passing through the Golden Gate.

The work of feeding the furnace to keep steam in the boilers at a pressure that made this speed possible proved too much for the crews, however, and the two cruisers were compelled to drop behind. A better argument in behalf of oil fuel has yet to be published. Liquid fuel does away with an army of stokers, precludes the possibility of delays from the cause stated in the Honolulu cable, and increases the steaming capacity, and consequently, the speed of warships.

p. 20. Notes. The Paraffine Oil Company's test on the Eastman Farm at Preston's Bend, eight miles north of Pottsboro, Texas, and just south of the Red River, is 600 feet deep and shut down. The Paraffine Company has a big block of leases in this territory, and the Producers Oil Company has leased a large acreage.

p. 21. Howard Hughes and the 'gator. A four-foot alligator picked up on the paved road to La Porte Sunday near Deer Park by Howard Hughes, was turned over to the fireman. - Houston Post.

Alligators do not hang around paved roads, unless it is for a purpose. We would be the last to question Chauffeur Hughes' fearlessness - for does he not stay at Goose Creek? And what man who cared for his life would remain there, exposed to the danger of a deluge of oil from the Ashbel Smith No. 3?

It is our opinion that Bill Lockhart's pet 'gator was the one waiting for Howard on the broad highway. An alligator knows his friends, just as a dog does, and Bill's alligator knows that Howard has an automobile, and that Howard is humane and kind to alligators, dogs, and oil men. So he just waited there in the brush until Howard came along, then climbed in and rode to Houston. Stranger things have happened.

p. 26. Notes. Jerry French has gone to Wheeler, Oklahoma, to assume the position of superintendent of drilling for the Santa Fe interests. Field superintendent Redmond, formerly with the Santa Fe at Saratoga, was in Houston early in the month, returning to Wheeler after visiting this city and Galveston. Another good gas well has recently been completed at Wheeler. Ardmore is supplied with natural gas from this field.

R. L. Blaffer and Mrs. Blaffer returned this month from a tour of Europe. While in London, they saw the Frenchman, Bierot, who was the first to cross the English Channel in a heavier-than-air flying machine. (The Wright Brothers, Orville and Wilbur, made their first airplane flight at Kitty Hawk, North Carolina, on December 17, 1903).

p. 26. Advertisement. Frederick G. Clapp, Consulting Geologist, Engineer; 610 Fitzsimons Bldg., Pittsburgh, Pa. Examinations and reports on oil and gas lands in any field. Explorations, surveys, and maps.

p. 28. A proposition. I will give 2,000 acres of excellent oil and gas leases and \$1,000 cash, if you will complete my test well, which is now 1,000 feet deep, and cased with 6-inch casing, to a depth of 1,800 feet, or to any less depth where oil or gas may be found in paying quantities. A. P. Dyke, Hope, Arkansas.

p. 28. Petroleum production of the United States and of the world. The following is from the report of Dr. David T. Day, United States Geological Survey.

State	1907 Quantity	Value	Avg. price/bbl	1908 Quantity	Value	Price
California	39,748,375	\$14,699,956	\$0.370	44,854,737	22,432,502	\$0.5226
Colorado	331,851	272,813	.822	379,653	346,403	.913
Illinois	24,281,973	16,432,947	.677	33,685,106	22,648,881	.672
Indiana	5,128,037	4,536,930	.885	3,283,629	3,203,883	.976
Kansas	2,409,521	965,134	.401	1,801,781	746,695	.414
Kentucky	820,844	862,396	1.051	727,767	706,811	.971
Louisiana	5,000,221	4,062,033	.813	6,835,130	4,131,173	.604
Michigan	4,000	6,500	1.625	15,246	22,345	1.466
New York	1,212,300	2,127,748	1.755	1,160,128	2,071,533	1.7856
Ohio	12,207,448	14,769,888	1.210	10,858,797	14,178,502	1.306
Oklahoma	43,524,128	17,513,524	.402	45,798,765	17,694,842	.386
Pennsylvania	9,999,306	17,579,706	1.758	9,424,325	16,881,194	1.7912
Texas	12,322,696	10,401,863	.844	11,206,464	6,700,708	.598
Utah	9,339	21,883	2.243	17,775	27,920	1.57
West Virginia	9,095,296	15,852,423	1.743	9,523,176	16,911,865	1.776
Totals	166,095,335	120,106,749	.723	179,572,479	129,706,258	.722

World Production of crude, 1905-1908, by countries (in barrels of 42 gallons):

Country	1905	1906	1907	1908	Metric Tons	1908 % prod
United States	134,717,580	126,493,926	166,095,335	179,572,479	23,942,997	63.09
Russia	54,960,270	58,897,311	61,850,734	62,186,447	8,291,526	21.85
Sumatra, Java, and Borneo	8,586,804	8,662,572	8,337,099	8,752,822	1,166,933	3.08
Galicia	5,765,317	5,467,967	8,455,841	12,612,295	1,754,022	4.43
Roumania	4,420,987	6,378,184	8,118,207	8,252,157	1,147,727	2.90

India	4,137,098	4,015,803	4,344,162	5,047,038	672,938	1.77
Japan	1,341,157	1,710,768	2,010,639	2,070,929	276,124	.73
Mexico	-----	-----	1,000,000	3,481,410	464,188	1.22
Canada	634,095	569,753	788,872	527,987	70,400	.19
Germany	560,963	578,610	756,631	1,009,278	141,900	.35
Peru	447,880	534,929	741,226	1,011,180	134,824	.36
Italy	44,027	53,577	59,876	60,000	8,344	.03
Other (est.)	30,000	30,000	30,000	30,000	4,000	.03
Totals	215,646,178	213,393,410	262,628,621	284,614,022	38,052,233	100.00

Vol. 8, No. 9, October 6, 1909, p. 9. Source of the oil at Madill. The oil deposits at Madill have been a puzzle to every operator who has gone into that field. Hence any light thrown on the subject will attract attention. Two members of the United States Geological Survey, J. A. Taff and W. J. Reed, were sent to Madill in April and May last, to make an expert report. This has taken the form of a brief bulletin, just issued by the department at Washington. After reviewing the geological conditions that exist at Madill, the geologists describe the physical properties of the oil there, and the formation in which it is found, all of which is familiar to the readers of the Oil Investors' Journal. The concluding portion of the report is given, in an attempt to explain the source of these oil deposits, as follows:

The Trinity sand is known to contain petroleum or bitumen, a residue of crude petroleum, at various localities in southwestern Arkansas, southern Oklahoma, and Texas. At all the localities where this crude petroleum or its residue have been found, the Trinity sand is several hundred feet thick. This sand is a beach or shallow water deposit of siliceous sand, with local comparatively thin beds of clay. It contains exceedingly scanty remains of organic life, either vegetable or animal. Here and there, thin shell limestone layers occur in the central part of the formation, and at widely separated localities, silicified wood has been found, but nowhere is there sufficient evidence of the occurrence of organic matter to warrant the assumption that the oil originated in the formation that contains it.

In southwestern Arkansas, and in northern Texas, as well as in southern Oklahoma, thick deposits of Carboniferous rocks that contain oil residue underlie the Trinity sand. Furthermore, the Carboniferous beds are tilted in such a manner that their edges project against the base of the Trinity sand. Any oil in the Carboniferous strata beneath the Trinity would be, in the course of time, conveyed upward, and would either lodge in that sand, or find an exit through it to the surface. There seems at present no other reasonable explanation than that the oil of the Madill Pool had its source in the underlying Paleozoic strata.

Whether the oil in its present position near the base of the Trinity sand, is contiguous to the original oil-bearing strata of the subjacent rocks, or whether it has migrated laterally, may possibly be determined by the drill, the inference is that such oil-bearing rocks would be found to trend in a northwest-southeast direction, with the strike of the rocks in the Arbuckle Uplift, as exposed in the district to the north and west of Madill.

p. 9. Notes. An automobile club has been organized in Tulsa, with C. J. Wrightsman as president, F. R. Letcher as vice-president, Eugene Blaise as treasurer, and Jesse Gillespie, secretary. Henry Ford's Model T sold for \$900 in October 1909.

J. E. Tomlinson has taken a house in Tulsa, and will soon be joined by his son and daughter.

J. E. Crosbie has purchased the Nelson residence at the corner of Sixth and Boulder, Tulsa, and will shortly bring his family here from Canada. The home he has just acquired is one of the handsomest in Tulsa.

p. 9. Suit on Glenn Pool land. The taking of depositions was commenced in Muskogee, on September 28, in a unit brought by Legus Perryman, guardian of Cleveland Grayson, a Creek Indian minor, against N. M. Shantz, Charles E. Douglass, Wright Thornburg, the Creek Oil Company, and the Prairie Oil and Gas Company. The case involves the property in the Glenn Field, recently sold by the Creek Oil Company to the Prairie Oil and Gas Company. The land included in this property

was included in the allotment made to Cleveland Grayson. It is charged that about one year ago, Grayson, who was then 18 years old, and therefore still a minor, was inveigled into a marriage with a white woman named Della Jones. Under the Creek law, a man attains his majority by marriage. It is further alleged that as soon as Grayson was married, he was induced to sign a deed to his Glenn Field land, and for which he had been promised \$30,000. But it is now claimed, the money was never paid, and that the woman, Della Jones, disappeared immediately after the marriage. The object of the suit is to set aside the deed.

p. 24. Bill Largey, Wizard of the drill (portrait). No oil formation has ever yet eluded him. At the request of several thousand of our paid-in-advance subscribers, we present herewith a likeness of Colonel William Largey, premier oil well driller and Hoskins Mound storm survivor. In accord with everything else that appears in this Organ of Truth, the likeness is accurate. Heartless critics have sometimes said that we juggle the figures that we print, but in this instance, we are above suspicion - it would be impossible to juggle Bill's figure.

Early in life, after his parents had waited in vain for him to develop Adonis-like surface indications, his father took him into the barn, closed the door, and broke the sad news to him. "It's no use, Bill," said he, "You can never be a floor-walker or a member of the Florodera Sextette. You'll have to work for a living, Bill." And Bill has been working every since.

At the tender age of 18, he drifted into the West Virginia oil region, since which time he has poked holes in the ground all over this country. He went from West Virginia to California, and came from California to Texas during the Spindletop frenzy. In 1905 he drilled the discover well at Hoskins Mound, Texas, completing a 4,000-barrel gusher at 582 feet. In 1907, he prospected in the naphtha fields at Montembo, Cuba, with International Bill Gray. He drilled for I. N. Knapp along the southern Louisiana coast, and this year returned to Hoskins Mound, where he is now superintendent of drilling for the Mound Oil Company. He has completed two more wells at Hoskins Mound, and has it to his credit that he is the only man who has been able to make a producing well in this field. Finding oil is as easy for Bill as drawing his breath. He knows all the systems, from pole tools to rotary, and can tell from the "feel" of the drilling cable or rotary pipe, whether the drill is in gumbo or pay sand. Bill was born in Webster County, New York, 37 years ago, is of Irish descent, and - need we add it? - a Democrat.

p. 32. Wildcat Notes. Savage Brothers are still drilling near Lipton, in Little River County, Arkansas, and making from 1 to 10 feet per day. A rotary is being used.

It is reported the Producers Oil Company is to drill for gas on leases in Palo Pinto County, Texas, near Mineral Wells.

Reports of a strike of oil in a well being drilled on the farm of Reel Coffey, just west of Little Elm, in Denton County, a few miles across the Collin County line, and about 25 miles northwest of McKinney, Texas, were greatly exaggerated. To date, nothing has been produced, but gas, though there is some show of oil.

A test is being drilled on the property of the Lester Mill Company, near Lester, Ouachita County, Arkansas, on the Gurdon-Camden branch of the Iron Mountain Railroad. The 10-inch was set at 608 feet in rock, and drilling is progressing very slowly, on account of the hard, granite-like formation. W. W. Fondren, of Houston, is interested in this test.

The Buzzard Springs Oil Company is drilling a test at Buzzard Springs, three and a half miles southeast of Dallas. The place gets its name from the fact that there is a quagmire in the locality, where cattle get bogged, trying to reach the water, and thus become the prey of buzzards. Marsh gas is in evidence, and this in connection with the general character of the place, led to the sinking of the test.

p. 32. Incorporated. Oklahoma. David Oil Company, of Bartlesville, \$20,000 capital. Incorporators, F. E. Overfield, Wann., Okla.; J. F. Overfield and E. B. Huston, Independence, Kansas.

Mission Oil Company, of Holdenville. Incorporators, J. D. Boxley, Frank L. Warren, and Charles W. Miller.

Hominy Oil & Gas Company, of Tulsa, capital \$16,000. Incorporators, E. F. Blaise, H. B. Taggart, and Amy Lamb.

p. 32. Advertisement. Roswell H. Johnson, M. S., Consulting Geologist. Specialty: Oil and gas in the Mid-Continent and Rocky Mountain States. Examination of oil properties, advice on leases and locations, maps for sale and to order. 403 Lannom Building, Bartlesville, Oklahoma.

Vol. 8, No. 10, Oct. 20, 1909, p. 6. Notes. A dispatch from Little Rock, Arkansas, dated October 18, says that T. J. Gay of the Gay Oil Company of Little Rock, will go before Governor Donaghey and ask him to appoint a commission to co-operate with the Oklahoma Commission, in the movement to build an oil pipe line through to the gulf from Oklahoma.

The Paw-Paw Gas Company has been organized at Bartlesville, with a capital of \$3,000,000, to lay a gas line to the zinc mines at Miami, Oklahoma. Homer Preston is prominently connected with the enterprise. The line will start from the Caney Gas Fields, which lie north of Bartlesville, near the Kansas border. The zinc mines of Miami were opened two years ago, and are attracting a good deal of attention. The ore bodies are identical in character with those of the Joplin District. It is expected there will be a large demand for natural gas, which is the best fuel for smelting purposes.

Frank Chesley, once associated with Robert Galbreath in the ownership of a large part of the Glenn Field, and who some months ago sold his holdings in the Bald Hill Field to J. E. Crosbie, now makes his home at Oklahoma City. He has become interested in zinc mining at Miami. He was in Tulsa a few days ago, and declared to his friends he had succeeded in opening the largest and finest body of zinc ore ever uncovered in the entire Joplin District.

Frank and Jesse Gillespie, both of whom made big money in the Glenn Field, are now devoting themselves to Tulsa real estate, and have been very successful.

p. 13. Incorporated. Texas. The Tyler Gas Company, of Tyler, capital \$100,000. Incorporators, George W. Stone, Peter J. Sult, H. H. Royland, and others.

Oklahoma. Stratford Oil and Gas Company, of Marietta, has increased its capital stock from \$35,000 to \$50,000.

Cache Valley Oil and Gas Company, of Walters, capital \$10,000. Incorporators, L. D. Hough, J. H. Bradley, D. U. Esser, and others.

Comet Drilling Company, of Bartlesville, capital \$5,000. Incorporators, W. H. Byron, D. A. Van Dyne, and A. A. Smith.

Jack Oil and Gas Company, of Vinita, capital \$10,000. Incorporators, N. K. Warner, M. H. Gubbles, J. V. Roberts, and others.

p. 18. Notes. A special from Decatur, Texas, says that a corps of engineers is working from that point, presumably for the purpose of locating a gas line from the Clay County Field to Denison, by way of Decatur. It is also suggested that Sherman, Whitewright, and Gainesville will be supplied with natural gas.

p. 26. Notes. A show of black oil is reported in a test being drilled by Capt. Wright at Red River City, north of Clarksville, Texas, at a depth between 1,000 and 1,200 feet.

Vol. 8, No. 11, Nov. 6, 1909, p. 10-11. Notes. The Sunshine Oil Company, W. G. Park, and others, of Beaumont, Texas, are starting two test wells in southern Oklahoma, one on the W. T. Burrows Farm, S-1/2 of SE-1/4 of Section 2, T. 8 S., R. 7 E., Bryan County, Edward Byrd, contractor; and the other on the Petit Farm, in Section 34, T. 5 S., R. 7 W., Jefferson County, Ollie Myers, contractor. The latter location is directly north of the Clay County, Texas, gas and oil development, on a line between that field and the oil wells at Gotebo, Oklahoma.

The celebrated McGilveray case was decided at Sapulpa, a few days ago, in favor of Hull and Reese, who thus are given possession of 160 acres of valuable oil land in the north extension of the Glenn Field. The sanity of the woman from whom Hull and Reese obtained their deed was called in question, but the court held that there was not sufficient evidence to show she was of unsound mind at the time she made the deed. The woman is now in an insane asylum.

Vol. 8, No. 12, Nov. 20, 1909, p. 6. Wildcat venture in Arkansas. A syndicate has been formed to put down some test wells in the vicinity of Eureka Springs, Arkansas. Those interested in it are Robert Galbreath, Tad Reese, Roy Dodd, and Tom Payne, all of Tulsa. They have secured leases on a large area of land, on much of which there is evidence of both oil and gas. The machinery has been ordered, and operations will begin as soon as it can be got on the ground.

p. 16-17. Incorporated. Texas. Buzzard Springs Oil & Gas Company, Dallas; capital stock, \$5,000. Incorporators, John G. Hunter, W. W. Bowen, W. H. Gaston, and others.

The North Texas Coal & Oil Company, Wilmington, Del.; coal and oil business: capital \$150,000. Incorporators, Thomas J. Brown, Reginald B. Leister, Suthie A. Brown, all of Tiffin, Ohio.

The Abilene Gas and Fuel Company, of Abilene, have filed an amendment, increasing its capital from \$50,000 to \$100,000.

Sherman Oil Company, of Sherman, capital \$15,000. Incorporators, C. T. Freeman, W. H. Chisholm, and Charles Batsell.

Consumers' Light and Heating Company, of Fort Worth, has increased its capital from \$200,000 to \$400,000.

Washita River Oil, Gas and Mineral Company; capital \$25,000. Incorporators, W. H. Kuhn, president and treasurer; F. G. Streator, vice-president and general manager; A. M. White, secretary. Office, Wilson Building, Dallas, Texas.

Oklahoma. Oklahoma Pipe Line Company, of Muskogee, capital stock \$2,500,000. Purpose, to construct 8-inch oil pipe line from Tulsa and Central Oklahoma Fields, southeast to point on Arkansas line in LeFlore County. From there, Prairie Oil & Gas Co. will build line through Arkansas into Louisiana, where connection is to be made with pipe line being constructed by Standard Oil Company of that state to refinery of company at Baton Rouge, La. James A. Moffett and H. C. Folger, both of New York, J. L. Havice, Muskogee, and others, directors. Company will make efforts to have line constructed and in operation by March of next year.

Tower Hill Oil & Mining Co., of Tulsa, incorporated with \$10,000 capital stock, by G. A. Stewart, Philip Kates, both of Tulsa, and A. B. Shawyer, Grimes, Iowa.

Jessie Oil Co., of Tulsa, incorporated with \$5,000 capital stock, by A. F. Ault, L. J. Martin, and T. D. Lyons.

Bromide Oil Co., of Coalgate, organized with \$50,000 capital stock, by John Freeny, and others, to develop oil properties near Coalgate.

Galbraith Drilling Co., of Muskogee, incorporated with \$10,000 capital stock, by H. H. Galbraith, P. B. Macoughtry, and C. B. Galbraith.

St. Lawrence Oil Co., of Tulsa, incorporated with \$10,000 capital stock, by E. R. Perry, Marion Dickerman, and Mildred Dickerman.

The Henryetta Fuel Col. of Okmulgee, capital \$15,000. Incorporators, R. T. Potter, and W. T. Thornburgh, of Okmulgee, and C. H. Kellogg, of Henryetta.

The Georgia Belle Oil Co., of Muskogee, increased capital stock from \$12,000 to \$100,000.

Weil Oil Co., of Muskogee, capital stock, \$50,000. Charles A. Weil, J. M. Givens, D. E. Shoaff, incorporators.

Yuma Oil Co., of Muskogee, capital stock \$50,000. M. E. Moore, R. W. Leftwich, J. M. Givens, Charles A. Weil, and others, incorporators.

Iron Mountain Oil & Land Investment Company, of Norman, capital stock, \$25,000. J. P. Idly, Oklahoma City; J. C. Minter and John Taylor, both of Norman; and others, incorporators.

Winn Oil Co., of Tulsa, capital stock \$15,000. P. J. White, Tulsa; Claude Miller and E. D. Huston, Independence, Kansas, incorporators.

Lare Oil Co., of Tulsa, capital stock \$32,000. H. Lendinghaus and A. H. Reller, both of St. Louis; H. W. Anders and M. S. Cory, both of Tulsa, incorporators.

Utility Oil Company, of Dewey, capital \$10,000. Directors, Fred B. Woodard, B. A. Lewis, and C. Earl Woodard.

Cella Oil Company, of Muskogee, capital \$10,000. Incorporators, W. A. Ried, W. F. Wells, and C. E. Shoenfelt.

Hattie Oil and Gas Company, of Bartlesville and Los Angeles, Cal. (amended articles). Incorporators, George T. Barr, of Santa Anna, Cal., B. E. Rice, of Bartlesville, Okla., and E. F. Parr, of Berkeley, Cal.

Bright Crude Oil Burner Company, of Oklahoma City, capital \$200,000. Incorporators, C. F. Parker, Ella Parker, Dan B. Gardner, J. W. Ryckman, and George J. Matthews.

Miscellaneous. Oil City Gas & Diamond Company, of Oil City, Arkansas; capital stock \$50,000. Purpose: to deal in mineral lands, etc. D. W. Thom, president; John Thom, vice-president; S. L. France, secretary-treasurer.

p. 20. A mammoth oil burning locomotive. The largest locomotive ever built for passenger service has just been turned out of the Baldwin shops at Philadelphia for the Atchison, Topeka & Santa Fe Railroad, and will haul trains over the mountains in southern California and Nevada. Engine and tender measure 105 feet overall, and weigh, loaded, nearly 300 tons. The tank holds 12,000 gallons of water and 4,000 gallons of petroleum, the engine being an oil burner. It has five sets of drivers, 73 inches in diameter, three sets being coupled to the high-pressure cylinders, and two sets to the low pressure cylinders. It has a tractive power of 53,000 tons, as compared with 35,000 tons, which is the rating of the largest passenger engines heretofore built.

p. 32. Composition of Oklahoma and Kansas petroleum. by Roswell H. Johnson. The analyses by the United States Geological Survey for the Mid-Continent and other fields is summarized. Oil given off at 150°F is gasoline, from 150° to 300° is illuminating oil, and residuum beyond 300° is fuel oil.

Composition of Oklahoma Petroleum

Pool	Sand	Gravity	Gasoline	Illum. Oil	Fuel Oil	Paraffine	Asphalt	Value Index
Madill	Trinity	47.50	22.00	38.00	36.80	1.41	0.00	82.00
Red Fork	Red Fork	36.95	11.00	40.75	47.95	5.145	0.20	62.75
Red Fork	Shallow	37.75	12.00	38.25	48.50	3.495	0.00	62.25
Glenn	Glenn	37.36	9.25	42.58	48.07	7.54	0.42	61.08
Delaware-Childers	Bartles.	35.40	12.57	35.87	50.02	5.38	1.25	61.01
Osage 44	Holland	36.70	11.50	35.00	51.90	0.00	1.26	58.00
Muskogee (Success)	Seibold	38.10	9.50	39.00	51.35	1.74	0.00	58.00
Alluwe	Bartlesville	36.40	12.25	32.50	52.15	4.51	2.27	57.00
Cherokee (Shallow)	Bartles.	35.40	11.52	33.79	52.29	5.50	1.74	56.83
Cleveland	Cory	36.00	6.25	44.25	48.65	5.57	0.61	56.80
Muskogee (Sheets)	Seibold	38.30	9.50	37.25	52.00	5.54	0.00	56.25
Webber	Bartles.	35.36	8.83	37.00	52.96	4.03	0.93	54.66
Morris	Morris	36.80	11.50	30.50	56.75	8.105	0.05	53.50
Gotebo	Gotebo	35.10	3.50	46.50	51.50	5.56	1.30	53.50
Muskogee	Muskogee	39.20	3.20	46.66	43.47	3.67	0.00	53.10
Townsite	Bartles.	34.40	9.75	33.00	54.70	6.63	1.72	52.50
Chelsea	Cleveland	34.20	6.20	38.70	54.70	6.45	0.60	51.10
Cleveland								
Cherokee-Deep	Bartles.	34.567	5.60	39.54	53.96	5.38	0.755	50.74
Skiatook	Bartles.	35.975	7.25	36.00	54.56	6.65	0.47	50.50
Osage 31-42	Bartles.	34.23	3.33	43.17	52.633	4.75	1.15	49.80
Near Dewey								
Bottoms	Bartles	32.70	3.00	42.00	55.70	6.07	.047	48.00
Bald Hill	Bald Hill	33.65	3.50	35.70	60.20	4.565	0.455	42.70
Dewey								
Shallow	McEwen	31.15	5.25	30.00	60.90	3.59	1.34	40.50
Skiatook	Chisholm	33.50	0.00	40.50	57.00	8.41	0.42	40.50
Mounds	Mounds	32.20	0.00	38.50	59.90	8.44	0.62	38.50
Wewoka	Wewoka	28.30	1.50	30.00	67.30	6.28	0.90	33.00

Composition of Kansas Petroleum

Bolton	36.20	14.70	31.00	49.20	----	----	60.40
Neodesha	35.97	11.33	35.50	51.10	4.196	0.086	58.16
Peru	37.05	10.75	32.125	56.62	5.24	1.250	53.60
Paola	34.50	10.00	33.00	55.80	7.44	2.94	53.00
Longton	32.15	9.00	29.25	59.45	5.745	1.225	47.30
Rantoul	31.80	6.25	34.50	57.50	3.765	2.545	47.00
Chanute	31.52	4.66	36.50	57.90	4.246	1.190	45.80

Moran	29.66	8.50	26.50	62.03	2.87	2.000	43.50
Wayside	29.70	7.25	28.00	62.45	4.66	0.61	42.50
Erie	31.70	3.00	35.00	61.80	1.22	0.88	41.00
Coffeyville	29.60	3.00	32.00	62.20	5.31	0.17	38.00
Humboldt	28.00	3.125	27.875	67.625	3.967	1.607	34.13

Composition of various petroleum

Formations in:

West Virginia	46.50	16.70	40.00	40.30	6.63	0.00	73.40
Illinois	32.40	12.40	31.50	56.10	4.47	0.82	56.30
Oklahoma	36.13	7.61	37.98	52.90	5.62	0.68	53.20
Kansas	32.30	7.63	31.77	58.60	4.43	1.32	47.00

The value index is an attempt to give a rough idea of the relative values of the oils. It was computed by doubling the percentage of gasoline, and adding to this the illuminating oil. The results were commented on in the Oil Investors' Journal of October 20, 1909, p. 22.

Vol. 8, No. 13, Dec. 6, 1909, p. 11-12. Notes. A party of Minneapolis businessmen have been in Tulsa lately. They are all friends of William Bechtel, formerly of Minneapolis, who has become extensively interested in oil properties here, and who has come here to live. Among those in the party were W. J. Welch, H. J. Clark, J. D. Vivian, F. S. Goodspeed, and J. B. Taber. Some of these gentlemen are associated with Mr. Bechtel in the Winchester Oil Company, which has a valuable lease in the North Glenn extension.

Charles Page has a 1,700-acre farm in the Osage country, nine miles northwest of Tulsa, on the Katy Railroad. He is erecting many commodious buildings there, and is stocking the place with game birds and wild animals. He is going to have a genuine zoo before he is done with it. He already has many pheasants, and has recently added several deer and elk. Mr. Page has made a great deal of money in the oil business, and he is going to spend some of it in creating the finest establishment of the kind in Oklahoma.

p. 19. Incorporated. Oklahoma. Halstead-Underwood Oil & Gas Company, of Tishomingo, capital stock \$25,000. B. Halstead, D. F. Underwood, A. E. Williford, incorporators.

Avery Oil Company, of Tulsa, capital stock \$5,000. A. W. Avery, J. C. McCready, George W. Kinney, incorporators.

Choctaw Coal & Colonization Company, of Wilburton, Capital stock \$325,000. W. P. Records, Kansas City, Mo.; M. E. Davis, Lawton, Oklahoma; L. S. Dolman, Ardmore, Oklahoma, incorporators.

Maloney Tank Manufacturing Company, of Tulsa, \$25,000 capital. Incorporators, J. W. Calkins, Harry Ross, Tulsa; O. W. Maloney, Independence, Kansas.

Miscellaneous. Arkansas Natural Gas Company, of Little Rock, Arkansas, organized with \$5,000,000 capital stock. J. C. Trees, president; E. P. Whitcomb, vice-president; H. S. Grayson, secretary-treasurer, all of Pittsburgh, Pa.; will apply for franchise to furnish Little Rock with natural gas from Louisiana fields; has also applied for similar franchises at Hope, Prescott, Gurdon, Arkadelphia, Malvern, and Benton, Arkansas.

p. 26. Wildcat Notes. A. P. Dyke reports his test near Hope, Arkansas, cased to 1,140 feet with 6-inch pipe. At the depth named, he states that he found a pocket of oil in shale; the formation also showing pyrites. He offers a liberal proposition in leases to anyone who will assist him in drilling the well deeper.

Vol. 8, No. 14, Dec. 20, 1909, p. 9. A Bank Failure. On December 13, the Farmers National Bank of Tulsa was closed by order of the comptroller of the currency. The event was a shock to the community, but it had been known for some time to insiders that the bank had been hit a severe blow by the failure of the Columbia Bank & Trust Company, of Oklahoma City, several weeks ago.

W.L. Norton, president of the Columbia Bank had at one time been heavily interested in the Farmers National Bank of Tulsa. Those who knew this fact naturally

supposed Norton would endeavor to get assistance from the Farmers Bank in the hour of his extremity at Oklahoma City. And this is exactly what did happen. It appears he had parted with his stock in the Farmers National some time before, but his relations remained close, and he appears to have borrowed about \$100,000 from the Farmers National, in his efforts to prevent the failure of his Columbia Bank. It leaked out that Farmers National had been crippled by the failure of the Columbia Bank, and the deposits in a few weeks fell from 1,000,000 to 500,000 dollars.

E. F. Blaise, president of the Farmers National, has been largely interested in oil properties, and being personally popular, a great many oil men were attracted to his bank. He and his associates established The First State Bank of Kiefer, and it was suspended the day following the closing of Farmers National, having some \$80,000 of deposits, largely of workers in the Glenn Field.

President Blaise issued a statement in which he directly charged the failure of Farmers National to the refusal of W. L. Norton to deposit adequate security for the loan he had secured in his efforts to tide over the trouble in Columbia Bank.

Mr. Blaise and some of his friends immediately set about to reorganize the Farmers National Bank. In the case of the Kiefer Bank, this was done by citizens of that place, with help from Tulsa capital, and that bank has resumed business.

p. 9-10. Notes. Robert Galbreath, Tad Reese, and others, who are going to do some drilling near Eureka Springs, Arkansas, are just getting their first well under way. It is at Green Forest, in Carroll County. The syndicate has 12,000 acres under lease in that vicinity. Robert Galbreath has been over the ground, and he says there are excellent indications of oil and gas. He has some fear, however, as to the formation.

p. 16. Incorporated. Texas. The National Gas Supply and Construction Company, of Fort Worth, capital \$10,000. Incorporators, Walter B. Scott, R. E. Harding, William Little, and others.

Oklahoma. Joiner City Oil & Gas Co., of Ardmore, capital \$250,000. Incorporators, C. M. Joiner, H. G. Wolverton, and O. H. Wolverton.

Hamilton Petroleum Company, of Muskogee, capital, \$100,000. Incorporators, George C. Butts, Garfield Johnson, Sadie Fortson.

The Henry Oil Co., of Okmulgee, capital \$100,000. Incorporators, D. W. Henry, E. L. Tallman, W. B. Pine.

The Missouri-Oklahoma Gas Co., of Eldorado, capital \$25,000. Incorporators, C. D. Hill, M. T. Stauffer, C. A. Edgar, and others.

Quapaw Gas Co., of Bartlesville, awarded contract for installation of gas mains from its wells near Bartlesville to Vinita, Afton, and Miami, Okla.

Sand Creek Oil & Gas Co., of Byron, Oklahoma, capital \$5,000.

Incorporators, W. H. Millspaugh, J. D. Howard, J. M. Hanne, and A. J. Titus.

Miscellaneous. Valley Oil & Gas Co., of Little Rock, Arkansas, capital \$25,000. Incorporators, R. A. Campbell, T. J. Gay, J. D. Arnold, and others.

The Valley Oil and Gas Co., of Little Rock, capital \$25,000. Incorporators, T. J. Gay, R. A. Campbell, and Douglas Heard.

p. 17. Heavy gassers in Clay County. Another strong gasser was added to the Petrolia Clay County, Texas, District, this month, when the Lone Star Gas Company completed its No. 1 Holt, lying east of the original development on the Lochridge lease, and northeast of the heavy gas wells on the Matlock and Schnell leases. The gas-bearing formations have now been developed over an area 2-1/2 miles east-west, and 3 miles north-south, the greatest distance being between the Producers Oil Company's well on Block 16 of the Byers lease, north, and the Navarro Refining Company's No. 1 Miller, to the south. On the east side are located the heavy gassers on the Schnell and Matlock leases, and on the west is the light well on the Stine lease. The gas is found at different depths. In the original Lochridge gasser, gas was developed at 1,465 feet. On the Panhandle lease, adjoining the Lochridge on the south, gas was obtained at 1,580 feet. East, on the Matlock lease, gas was found at 1,740 feet, and in the Schnell well, at 1,704 feet. In the Miller well, farthest south, gas was developed at 1,571 feet. The Holt is

about 1,550 feet, while the Producers well on the Byers lease to the north is 1,730 feet to gas. The Schnell well showed very light at 1,700 feet, but was drilled 4 feet deeper and exhibited the heaviest gas pressure that has been witnessed in the field. Both the Schnell and the Miller were running wild at last accounts. The gas appears to be getting stronger to the east and southeast, and recent developments have dissipated all doubt as to an abundant supply.

The Lone Star Gas Company's 16-inch line to Fort worth is nearing completion. Paul Gage is in charge of the construction. Early in the month, Cal N. Payne, of Pennsylvania, who is interested in the Lone Star Company, and E. R. Brown, manager, visited the field. Mr. Payne, who was perhaps the pioneer backer of Clay County gas, was much gratified at the favorable results achieved in recent development.

p. 18. Hot stuff in Arkansas. A Little Rock, Arkansas, newspaper reporter wrote a story last month to the effect that an immense gusher had been brought in at Laconia, Desha County, Arkansas. The well in question is being drilled by Memphis and New York people, and Alec Thompson is in charge of the rig. This report was not confirmed.

The test in Dallas County, Arkansas, 45 miles south of Hot Springs, being drilled by the Clifford Well Company for William Grayson of the Grayson-McLeod Lumber Company, developed boiling hot water at 1,829 feet on December 2, flowing over the derrick. The water is sulphurous and salty. It is regarded by the owners as a favorable sign, and they are going to continue development. The present hole is the third one in this district.

The test near Lester, Arkansas, is hung up, with nothing in site.

p. 20-21. Testing the territory west of Caddo. Notes. It is reported that the Producers Oil Company is on a deal for 30,000 acres of leases in Cass County, Texas, nearly due west of the Trees well in the Northwest Caddo Field extension.

Surveyors for the Standard Oil Company of Louisiana are taking right-of-way for a line from the Standard's main trunk line, near Belcher, to a point near the Trees well. Officials of the Standard have been over the ground lately, and it is reported that a deal is on for the Trees property in this territory, comprising more than 4,000 acres of leases.

Since the Trees came in, considerable oil is going into storage at Caddo.

The Standard's 8-inch trunk line through Louisiana to Baton Rouge is about completed, and work is now under way on the section of the line being built by the Prairie Oil & Gas Company through the southwestern corner of Arkansas. The Oklahoma Pipe Line Company is laying that part of the line which will be in Oklahoma, starting from the Glenn Pool. It is expected that the entire line will be completed and in operation before summer. It will afford an outlet for Oklahoma crude and Caddo oil. The line terminates at the new Standard refinery at Baton Rouge.

J. C. Trees Oil Company's No. 4 Stiles, Section 27-21-16, came in on November 12, 1909, making 2,500 to 3,000 barrels of light oil a day, extending the Caddo deep sand 5 miles farther northwest. (6-inch casing was set at 2,100 feet in August.)

The only well completed at Caddo during the first half of December, was the Trees No. 1 Helpman, Section 16-21-16, at 40,000,000 cubic feet of gas per day. Twenty-one wells were drilling and 3 rigs were up on December 15.

The production of the entire Caddo Field on December 15 was put at 3,575 barrels a day, and the Trees well fell off to about 1,000 barrels a day.

p. 26-27. Mounds of the coastal plain. by John W. Otley. (Pimple) mounds were supposed to be caused by prairie dogs and erosion. My conception as to their genesis is at variance with these ideas. In travelling from the town of Nome on the Southern Pacific Railway, to Sour Lake, Texas, you will find these mounds just beyond the wagon bridge over Pine Island Bayou. Some of them are 10 feet in diameter, and are flexed, and some 4 feet high. As we near the oil field, they give much evidence that gas was the principal factor in building them, or water under gas pressure.

1910. Vol. 8, No. 15, Jan. 6, 1910, p. 9. Prairie starts shipments from Jenks. The Prairie Oil & Gas Company made its first shipment of oil in tank cars from Jenks to the Standard refinery at Baton Rouge on December 29. Heretofore these shipments have been confined to Muskogee. The loading facilities at Jenks are extensive and it is expected the Prairie shipments will show a big increase in January. The first train load that went from Jenks consisted of fifteen cars.

p. 9. Gulf will ship from Muskogee. The Gulf Pipe Line Company has completed a small loading rack on the Midland Valley Railroad track at Muskogee, and will make shipments from that point. The rack will accommodate only two cars, and the shipments will of course be limited. The Gulf Pipe Line Company recently purchased the property of the Maryland Oil Company in the Muskogee Field, comprising 20 acres and one producing well.

p. 9-10. Farmers National Bank to be reorganized. The failed Farmers National Bank of Tulsa, in which so many oil operators were depositors, will be reorganized and reopened under altogether new auspices. Abundant capital has been provided, and it is expected all details will be completed so the new bank can begin doing business about January 10. P. J. White, western manager of the Oil Well Supply Company, will be president. Among those who have been actively associated with Mr. White in the reorganization of the bank are D. F. Connolly, H. F. Sinclair, and R. S. Litchfield. The last two gentlemen are oil producers and well known bankers of Independence, Kansas. The combination is a strong one, and the new Farmers National will command the confidences of the community from the start. Mr. White is admirably fitted for the office of president of the reorganized institution. He and his brother, Thomas White, were fortunate enough to be associated with Mr. Sinclair in the Alpine Oil Company, which, within the period of a little more than a year, cleaned up close to half a million dollars in the Flatrock Field just north of Tulsa.

p. 14. Caddo Production. The production of the Caddo District, embracing the new James Bayou or Hart's Ferry territory, in which the Trees deep gusher is located, and the Vivian, Lewis, Pine Island, Black Bayou, Oil City, and Mooringsport localities, amounted to 114,465 barrels in December, practically duplicating the November record. The output is averaging 3,600 to 3,800 barrels a day. The deep sand product is high grade, testing 41 degrees Beaume, and showing considerable paraffine. In December, more than half of the oil produced in the field was stored, with car shipments amounting to less than 56,000 barrels. The Texas Company is providing additional steel storage at Caddo City, having filled its two tanks there and four at Griggsby's Island, south of Shreveport. Most of the oil that went out by car - there is as yet no pipe line outlet for Caddo oil - was shipped to Beaumont and Port Arthur for refining. It is expected that a pipe line connection will shortly be established with the field, as the Standard has surveyed a lateral from its main line, west from Belcher, to the trees development near Hart's Ferry. The Standard's main line in Louisiana, from Ida in the northwestern corner of the state, to the refinery at Baton Rouge, a distance of 240 odd miles, is completed, and whenever the Caddo production gets large enough to be attractive, the lateral can be slapped in. Some of the eastern officials of the Standard have gone over the Trees property, and there is talk at Shreveport of a deal by which the Standard will get in on production in this territory.

p. 14-15. Capitalists from the North. On December 20, a party of St. Louis and Eastern capitalists arrived at Vivian in a special train to look over the gas holdings and wells of the Busch-Everett Company. St. Louis newspapers state that it was in the nature of an inspection of the field by the Laclede Gas Light Company interests, with a view to determining the feasibility of piping Caddo gas to St. Louis, a distance of 460 miles. In the party were August A. Busch, son of Adolphus Busch, the millionaire St. Louis brewer, and now a heavy holder of Laclede stock; Edward H. Everett, president of the Busch-Everett company; Louis E. Denning, general manager of the company; G. H. Walker, of the

Laclede and Busch-Everett companies; Thomas H. West, of the St. Louis - Union Trust Company; W. K. Bixby, of the American Car and Foundry Company of St. Louis; Walker Hill, president of the Mechanics-American National Bank of St. Louis; Harry B. Hawes, attorney for the Busch-Everett Company; J. C. McDowell of the Kansas Natural and other natural gas companies; James Stewart of the contracting firm of James Stewart & Company, of New York; L. A. Lewis of New York; and a number of others. It is reported that Mr. Stewart estimated, offhand, that the cost of a gas line to St. Louis would be \$12,000,000. A. J. Mercer, manager of the Busch-Everett Company at Shreveport, was with the visitors during their inspection of the field, and accompanied them as far as Texarkana on their return trip. Some of the company's wells were opened, and the possibilities of the gas supply were abundantly demonstrated. The statement was made that the Busch-Everett Company has already developed 500,000,000 cubic feet per day in the various wells already completed by McCann & Harper, contractors. The party started back on the evening of the 20th. The Laclede Gas Company's franchise in St. Louis, where it is now the only distributor of artificial gas, gives it the right to sell natural gas, and it is stated that a rate not to exceed 45 cents a thousand feet will be charged when natural gas is introduced in the city.

p. 15. Gas for Arkansas cities. R. G. Dawes of the Vivian Oil Company and other interests having a large area of territory in the heavy gas territory north of Caddo and near Vivian, Louisiana, who is also a member of the Dawes syndicate, owning many gas franchises in the cities of the Southwest, has confirmed the report that he and his associates will finance a natural gas line from Vivian to Little Rock, Arkansas. Hot Springs, Malvern, Pine Bluff, Camden, and other Arkansas cities will be served by the line. Orders for 101 miles of 16-inch, 58 miles of 12-inch, and 78 miles of pipe of smaller sizes have been placed at Pittsburgh, the total outlay for pipe and fittings aggregating \$700,000. The work will be done by the Arkansas Natural Gas Company, J. C. Trees, president, and H. S. Grayson, secretary. A mortgage has been filed at Shreveport for \$2,750,000 to cover an issue of 6 per cent bonds in favor of the Colonial Trust Company of Pittsburgh, the proceeds to be used in building the gas lines.

p. 15. Wheeler, Oklahoma. The Santa Fe Railroad has abandoned its deep test at Wheeler, Oklahoma, at 3,600 feet. No oil was found below the 1,200-foot formation, in which a number of producing wells have been completed. Nos. 37 and 38 are now being drilled. Gas from the Wheeler Field supplies Ardmore, Oklahoma, 20 miles southeast. The Santa Fe has never utilized the oil from its Wheeler wells. It is stated that the deep test cost over \$40,000. The drillers were on it eighteen months.

p. 20. The Arkansas Natural Gas Company of Little Rock (recently reported incorporated with \$5,000,000 capital stock) has invited proposals for construction of a gas line from Vivian, Louisiana, to Little Rock, Hot Springs, Pine Bluff, and other Arkansas cities, and will begin construction February 1, using 101 miles of 16-inch main, 58 miles of 12-inch, and 78 miles of smaller sizes of pipe. The pipe, valves, and fittings will cost about \$700,000. The company will build a compressor station at Malvern, Arkansas. J. C. Trees, of Pittsburgh, Pennsylvania, is president of the company.

p. 21. Incorporated. Texas. The North Texas Oil & Gas Co., of Paris, Texas, has been organized to prospect for oil and gas between Paris and Red River. Thomas S. Bailey, secretary.

Oklahoma. Blarney Oil Co., of Tulsa, \$25,000 capital. Incorporators, D.C. Accosta, W. R. Sessions, and R. E. L. Coon.

Tesca Oil Co., of Tulsa, \$12,000 capital stock. Incorporators, P. J. White, Tulsa; E. B. Huston and Claude Miller, both of Independence, Kansas.

Pacific Oil & Gas Co., of Bartlesville, \$5,000 capital stock. Incorporators, Charles W. Pennell, P. A. Sompayrac, and Robert F. Coil.

Frederick Oil & Gas Co., of Frederick, \$10,000 capital stock. Incorporators, John E. Eberle, A. R. Cotton, and J. R. Goddard.

Hunter Gas, Oil, Fuel & Development Co., of Hunter, \$1,000 capital stock. Incorporators, O. G. Hotton, S. P. Thomas, M. C. Race, and others.

The Queen Oil Co., of Okemah, capital \$7,000. Incorporators, J. C. Potter, R. A. Dill, C. T. Huddleston, and others.

p. 24. J. N. Huston, former United States treasurer, and who will be remembered as president of the Beaumont Trust Company during the boom days at Beaumont, is reported to have been indicted at Washington, D.C., on charges of conspiracy and using the mails to defraud. He was an official of the National Trust Company, which was raided by postoffice inspectors last September. The Beaumont Trust Company figured in the affairs of the Anglo-American Oil Company, a Beaumont boom promotion. Both concerns are dead.

p. 27. How they regard Caddo in the East. It is very natural at this time of the year to cast about for the most important discovery of the preceding 12 months. There was one, wholly unexpected and not related to the eastern fields, only so far as it may exert an influence on the position the high grade eastern product has held since the inferior grades entered into competition. In Caddo Parish, in the northwestern corner of Louisiana, the J. C. Trees Oil Company, all Pittsburgh parties, drilled in a deep well on the Stiles tract, located on the west side of James Bayou, and got a gusher. At a depth of 2,000 feet the sand was penetrated, and the well began to flow with great force. Its flow was estimated at 2,000 barrels a day. The well was drilled in on the 15th of November, and at the close of the year it was holding up at 1,000 barrels a day, with the tools in the hole. The size of the well is not extraordinary, but the gravity of the oil is, for that region, and it is that alone that makes it an important factor. The test shows the Caddo oil to be of 41 or 42 gravity and on a paraffine base. It may be a matter for serious consideration on the part of the eastern operator.

p. 28. Growth of gas-producer power plants. More than 500 producer-gas power plants, ranging in size from 15 to 6,000 horsepower, are now in operation in the United States. About 88 percent of these plants are running on anthracite coal, a few on anthracite or coke, and the remainder on bituminous coal and lignite. In a bulletin on the recent development of the gas-producer power plants in the United States (Bulletin 416), just issued by the United States Geological Survey, R. H. Fernald, consulting engineer, states that the internal combustion engine has already become a serious rival of the steam engine in many of its applications, and that the development of the large gas engine within the last few years has been extremely rapid. Only nine years ago, a 600 horsepower engine exhibited at the Paris exposition was regarded as a wonder, but today, four-cycle twin-tandem, double-acting engines of 2,000 to 3,500 horsepower can be found in nearly all well-equipped steel plants; and some plants in this country contain several units rated at 5,400 horsepower each. This rapid advancement of the large gas engine was made possible by improvements in the production of cheap gas directly from fuel by means of the gas producer. A few scattered producer-gas plants were installed for power production in the United States before 1900, but the application of engines of this type to the production of power in any general sense has been developed since that date.

p. 29. Not hung up at Lester, Arkansas. Editor Oil Investors' Journal: We note in your issue of the 20th, a write-up on the Grayson McLeod well in Arkansas; also a statement that our test well at Lester is hung up, with nothing in site. We beg to furnish you a correction of this report as follows: At 800 feet in our Lester well we had a nice oil showing. We are now 1,238 feet deep, with a fine gas showing, which makes it really dangerous for outsiders around this hole. We are by no means hung up. We have just set our 6-inch casing in a rock at 1,238 feet, anchored same at top, protecting against a gas blow-out,

and drilling will commence immediately after holidays of this week. A party has offered \$50,000 for 480 acres of land under our lease adjoining our lands in fee. Also, we have been offered by a reliable party quite a sum, for a half interest in our interest. If the proposition carries, he is to take charge of development and push it at his own expense. At 1,180 feet we struck a heavy vein of hot salt water, analysis of which shows one pound of pure salt to each two gallons of flowing salt water. Be your own judge as to whether we are hung up, and nothing in site....Lester Mill Company, Lester, Arkansas, December 22, 1909.

p. 29. Wildcat Notes. A pocket of gas is reported at about 800 feet in a test in Sevier County, Arkansas, 7 miles southwest of Lockesburg.

The test being drilled near Laconia, Desha County, Arkansas, has changed from rotary to cable tools.

A flow of gas is reported on the Bland Farm, nine miles from Orange, Texas, at a depth of 20 feet.

A prospect hole is to be started about March 1 at Murfreesboro, Pike County, Arkansas, to be financed by Hope, Arkansas, people.

A test is soon to be started near Rover, Arkansas. A second test will be started as soon as the weather permits near Plummerville, Conway County, Arkansas.

Vol. 8, No. 16, Jan. 20, 1910, p. 5. The Texas Company will build a refinery on the 120 acres purchased last month adjoining its Clinton tank farm, just across the Arkansas River from Tulsa. Complete plans have not yet been worked out but the refinery will have a capacity of perhaps 7,000 barrels at the start, and this will be increased as the needs arise. The Texas Company now operates refineries at Port Arthur, Dallas, and Port Neches, Texas, and has purchased the site for another on the Red River, south of Shreveport. No move has yet been made toward the construction of the Shreveport plant, but considerable light Caddo oil is in storage on the site. Work on the foundations for the Tulsa refinery will start in the near future, and material for the stills will be on the ground within a few weeks.

p. 14. Natural gas activity in the Southwest. Natural gas activity is perhaps greater in the Southwest at present than in any other section of the country. Pipe lines to supply important centers of consumption are being proposed from the Oklahoma and Louisiana fields, and it is likely that before the year is out, some of these projects will have taken form in actual construction. The Lone Star Gas Company has completed its 110-mile line, 16 inches in diameter, from the Clay County, Texas, Field to Fort Worth, and arrangements have been made for the distribution of gas in that city. Dallas will get natural gas from the same source. Interests represented in the Laclede Gas Light Company of St. Louis are seriously considering the piping of natural gas from the Louisiana field, north of Shreveport. The Busch-Everett company has developed sufficient gas in this district to supply several cities of the size of St. Louis. The distance between the point of consumption in this case is nearly 500 miles. A franchise has already been granted the Busch-Everett interests to sell natural gas in New Orleans, the supply to come from the region north of Shreveport. It is stated that the route of the pipe line to New Orleans has already been surveyed. The Dawes interests and the Benedum-Trees people are preparing to pipe Louisiana gas to the larger cities of Arkansas, including Little Rock, Hot Springs, Pine Bluff, and others. Texarkana is now being supplied from the Louisiana field. The latest proposition is a natural gas line from the Louisiana field to Houston, Texas, a distance of about 200 miles. Representatives of the Houston Business League are investigating the supply at Caddo, with a view to making recommendations as to the project. It is considered reasonably certain that they will report favorably on the proposition. A number of the smaller cities in North Texas are now receiving natural gas from the Clay County Field, and lines are being surveyed to other towns. The present year promises many important developments in Texas and Louisiana in the natural gas industry.

p. 15. Fort Worth will soon have natural gas. The gas plant, including

the mains and service pipes, of the Fort Worth Light & Power Company, have been sold to Woodward Babcock, of New York. Mr. Babcock has entered into an agreement with the Consumers Light & Heating Company to use the mains in distributing natural gas in Fort Worth. J. C. Lord, superintendent of the Fort Worth Light & Power Company, confirmed the story in an interview with the Fort Worth Record last night....The main line from the Clay County natural gas fields, consisting of 110 miles of 16-inch pipe, is now within three and one-half miles of the North Fort Worth line, and all connections should be complete and the lines finished within thirty days.

p. 15. Houston wants natural gas from Caddo. A committee appointed by the Houston Business League, and composed of Commissioner J. Z. Gaston, Walker Ellis, and Secretary Adolph Boldt, left Houston Thursday evening, January 20, for the Caddo, Louisiana, gas fields, for the purpose of making a thorough investigation of the possibility of piping natural gas from the district to Houston. Should the report of the committee be satisfactory and bear further investigation, local capital will be immediately secured, and the work of piping the gas to Houston will be started at once....Houston is about 200 miles from the Caddo District.

p. 17. Big gasser at Petrolia closed in. Petrolia, Clay County, Texas, January 15. The 40,000,000-foot gasser on the Miller tract at Petrolia, Texas, brought in by the Lone Star Gas Company on November 14, was closed-in January 11 after running wild 58 days. Five different packers were tried in this well before the salt water was cut off. This was finally accomplished with a mandrel anchor packer. The estimated rock pressure of this well is 740 pounds. Hundreds of persons have visited this well, and its roar could be heard 10 to 12 miles away.

p. 17. Arkansas people in Caddo gas. The Dunn Gas & Oil Company, composed principally of Little Rock, Arkansas, people, capitalized at \$100,000, of which \$52,000 has been subscribed and which controls land in the Caddo, Louisiana, oil fields, has filed articles of incorporation with the secretary of state at Little Rock. The officers of the company are: R. J. Reaves, president; H. C. Daniels, vice-president; E. R. Wilson, secretary; I. O. Runyan, treasurer, who with L. M. Dunn, J. A. Gosnell, and J. W. Conger, constitute the board of directors. The two other stockholders are Attorney General Hal L. Norwood, W. R. Tucker, and W. H. Barnes. All the stockholders except L. M. Dunn of Blanchard, La., are residents of Little Rock. The company proposes to begin at once the development of its gas and oil property in the Caddo District. The office of the company is Room 616, Southern Trust Building, Little Rock.

p. 17. Local people have raised \$14,000 and are now rigging up to drill a well at Glen Cove, a small town about 15 miles east of Coleman, in Coleman County, Texas. The location is in territory in which oil and gas seepages occur.

p. 23-24. Electra, Texas, January 14. This field was discovered by Frank Cullinan, the original discoverer of the Henrietta Field (now Petrolia), and Frank was assisted in his discovery here by Doctor Cook, sometimes called Wilson. They are said to have first discovered one W. T. Waggoner of Fort Worth, Texas, who, after listening to them for a short time, simply turned all his business over to them and slowly walked away, as though in a dream. It is said he has never been near the drilling or pumping wells since. They began pumping their well a few days ago, and have been pumping it fairly steady since, using what gas it makes in the boilers, and also what oil it makes, but with all this and some fifty barrels on hand when they started, the contractor is such a reckless cuss (Bill Ellinger) that he has burned the whole damned business up for fuel, and is now shut down clamoring for more oil or any other old thing to burn, so as to drill more oil wells to get more oil. We accidently went through the Waggoner lands past the Texas Company wells, and were told by Doctor Cook (Wilson) to keep drifting

along...Frank Cullinan, after discovering Henrietta, proceeded to drill three dry holes there, two of which are now abandoned, and the other is so deep that they never try to measure it, but we all wish him better luck here, even if he did order us thrown off his lease of only 270,000 acres.

p. 26. The Texas Company leases Waggoner land. A pumping rig was installed on the test well on the Waggoner land, eastern edge of Wilbarger County, near Electra, Texas, early in the month. Last week, pumping was started, with gas from the well and the oil which had been baled from it amounting to some fifty barrels, being used for fuel. The production under the pump was light, and by the end of the week the rig was shut down, waiting for fuel. There is a lot of water in the hole, and it is believed that some of the pay sand was cased off. The Texas Company last month leased from W. T. Waggoner of Fort Worth, a body of 270,000 acres of land in the eastern part of Wilbarger County and western portion of Wichita County, Texas, taking with it the well above referred to, which showed 18 feet of sand, carrying 41 gravity oil. The consideration is not stated, but it is understood that the company reimbursed Waggoner for his outlay in drilling several tests, and pays him an eighth royalty on all oil produced. The land extends southwest from the Fort Worth & Denver Railroad. A test has been started by The Texas Company in section 16, about 600 feet south of the well drilled by Waggoner, and another is started 900 feet east, in Wichita County. E. R. Brown has purchased 1,100 acres in fee, one mile north of the Waggoner well, in section 17, H. & T. C. Railroad Survey. It is stated that he paid \$25 an acre. The Waggoner test was drilled into salt water, and the Texas people have laid a line of sewer pipe to drain the water when they pump the well. Waggoner's land holdings in Wilbarger and Wichita counties aggregated 570,000 acres. In December, he gave his two children 300,000 acres, and the remainder he leased.

p. 29. Mounds of the Coastal Plain, by John W. Otley. (Pimple Mounds). From Houston to Humble, along the shell road, we pass from those purely of hydrostatic occurrence to alkali mounds. ...I have had the alkali mounds entirely removed to a level of the surrounding plain, and in the space of three months they were quite built up again. These must be made by some hydrostatic agency, the water coming in contact with salt and allied alkalis, finding their way to the surface. The forces creating these are chemical. Near the Humble Oil Field, these mounds apparently change as to cause, constituent material, and size. And in the field proper, they have disappeared altogether, and more of a hog wallow condition sets in. The few appearing in the field, especially in the timbered section, were due to both hydrostatic and gaseous forces. Lakelets of uplift, surrounded with elevated soils or mounds, occur on the most elevated section of the plains, and later are elevated. In 1895, working geology between Batson and Liberty, Texas, a large lake occurred near a farmer's house. In 1902, I revisited the area and the farmer advised me that the lake disappeared and was now high, dry land, under cultivation. There must be some powerful action to bring this about in so short a time. These mounds do not indicate with definiteness oil pools.

p. 29. Incorporated. Texas. Dallas Gas Appliance Co., of Dallas, \$2,000 capital. Incorporators, A. Janden, L.A. Walker, A. W. Peterson, Curtis Hancock, and others.

Baird Development Co., of Dallas, \$10,000 capital. Incorporators, J. V. Baird, H. L. Scales, and G. G. Baird.

The Texarkana Gas Co., of Wilmington, Delaware, has been granted a permit to do business in Texas. Capital, \$10,000. Headquarters, Texarkana, Oklahoma. Joiner City Oil and Gas Co., of Ardmore, capital \$250,000. Incorporators, C. M. Joiner, H. G. Wolverson, and O. H. Wolverson.

Hamilton Petroleum Co., of Muskogee, capital \$100,000. Incorporators, George c. Butts, Garfield Johnson, and Sadie Fortson.

The Henry Oil Co., of Okmulgee, capital \$100,000. Incorporators, D. W. Henry, E. L. Tallman, and W. B. Pine.

The Missouri-Oklahoma Gas Co., of Eldorado, capital \$25,000.
Incorporators, C. D. Hill, M. T. Stauffer, C. A. Edgar, and others.

Sand Creek Oil and Gas Co., of Byron, Oklahoma, capital \$6,000.
Incorporators, W. H. Millspaugh, J. D. Howard, J. M. Hanne, and A. J. Titus.

Marvel Crude Oil & Gas Burner Co., of Oklahoma City, capital \$1,800.
incorporators, J. F. Gaubbs, J. E. Goss, Isaac Williams, and John E. Goss.

Prairie Valley Oil & Gas Co., of Shattuck, capital \$20,000.
Incorporators, J. A. Pettis, O. E. Hull, and R. G. O'Hair.

The Mack Oil Co., of Okmulgee, capital \$15,000. Incorporators, E. T. McDowell, Wright Thornburgh, W. E. Wood, and others.

Murray Hill Oil & Gas Co., of Sapulpa, capital stock \$10,000.
Incorporators, Virgil Hicks, E. H. Sairin, and H. H. McFann.

Vol. 8, No. 17, Feb. 6, 1910, p. 9. Holdenville. The Paro Oil Company's test on the Paro Brunner, in the SW 1/4 of NE 1/4 of SW 1/4 of Sec. 8-7N-10E, is 1,850 feet deep, and will set the 6 and 5/8 - inch casing at 2,000 feet.

p. 9. Ada. The test near Ada is 1,280 feet deep, and caving badly. It showed a little oil at 1,040 feet, and 20 feet of sand at 1,080 feet. The hole was started with 18-inch casing, and showed gas at various depths. Red bed formations were encountered at 500, 600, 800, and 900 feet.

p. 11. Progress of the new pipe line. By Saturday night, January 29, 1910, the Oklahoma Pipe Line Company had completed 75 miles of that portion of the line to be laid in the state of Oklahoma. As there will be 150 miles laid in Oklahoma, the work on that date was just half done. Good progress is also being made on the three pumping stations. The first joint on the big 8-inch pipe line was placed upon the right of way Thursday afternoon, December 9, 1909, under the supervision of Hiram Standeven, at Houston tank farm, one mile east of the Glenn Pool. Three days saw the work out of Glenn Pool finished, and the wagon train headed down the line to Bixby. At Bixby, the gang spent Christmas, finishing there December 26. From Bixby, they went to Morris, and there the forces were divided. Sixty of the teams began a one hundred mile move to Red Oak, on the old Choctaw, Oklahoma, and Gulf, fifteen miles east of Wilburton. In the meantime, a large number of men and teams had been very busy distributing and connecting and burying the line from between Boynton and Morris, on south through Council Hills. On January 4, they finished at La Flore, next stop south of Red Oak, and on January 5 began at Bengal and Talihina simultaneously. On January 11, they finished at Bengal and all forces joined up at Talihina, where, on January 25, they were in the midst of the Winding Stair Mountains, north of the Kiamichi River, and the Kiamichi Mountains, south of the river. This is the roughest country through which a pipe line has even been constructed in Oklahoma. It was expected that the gangs would finish distributing pipe at Talihina in three or four days, after which the forces were to be divided again. A number of the men are going to remain, and place the machinery and material on the ground for the midway pump station on the Oklahoma division, while the others are to go on to Hatfield, Arkansas, the next location where pipe is to be distributed. It looks now as if the line will be laid by the middle of March, or the first of April.

p. 11-12. Lightning boosts the oil business. On the 25th of last May, 1909, a bolt of lightning struck the earth on the farm of Mrs. Josie Tinneborn, of Madison, Beaver County, Oklahoma, and opened up a strong seepage of oil. The spot was visited by many oil men, and numerous propositions were made to Mrs. Tinneborn to drill a test well. She was also urged to sell her land. She resisted all these proposals, and on January 10 completed the organization of a company of her own, which will do some drilling. It is called the Prairie Valley Oil and Gas Company.

p. 20. Incorporated. Oklahoma. The Apex Oil Co. of Tulsa, capital \$10,000.

Incorporators, G. T. Braden, J. H. Evans, and Manuel Hirsh.

The Wanetta Oil & Gas Co., of Wanetta, capital \$100,000. Incorporators, T. B. Dumas, of Shawnee; C. A. Harrell and E. R. Burton, of Wanetta.

The Sittel Oil & Gas Co., of Okmulgee, capital \$10,000. Incorporators, Lee A. Vorhees, M. A. Holcomb, A. F. Boone, and others.

The Bureau Oil Co., of Okmulgee, capital \$5,000. Incorporators, R. J. Burgess, R. L. Adams, of El Reno; L. M. Burgess of Mondamin, Iowa.

Jolly-Gertz Oil Co., of Muskogee, capital \$10,000. Incorporators, H. L. Jolly, Fred Gertz, Jr., and Max E. Moore.

Sallisaw Oil, Gas, & Mineral Co., of Sallisaw, capital \$6,000. Incorporators, W. W. Wheeler, D. P. Delaney, Luther Kyle, and others.

S. A. Mellon Oil Co., of Tulsa, capital \$30,000. Incorporators, W. M. Black and A. B. Crum, of Tulsa, and F. L. Hughes, of Houston, Texas.

Creata Oil Co., of Muskogee, capital \$12,000. Incorporators, G. H. Galbreath, of Muskogee, F. H. Houston, and Claude Miller, of Independence.

Pryor Creek - Chouteau Gas Company, of Claremore, capital \$50,000. Incorporators, George W. Eaton, B. H. Hester, and George A. Schmitt, of Claremore.

p. 24. Louisiana and Arkansas tests. It is reported that S. A. Guy and local capitalists of Shreveport, Louisiana, have acquired a half interest in the Lester Mill Company's lands at Lester, Ouachita County, Arkansas, which consists of 19,000 acres, and are going to continue development. A prospect hole was recently drilled on the property under contract, but not completed. The driller had had no experience in developing for oil, but sufficient evidence was obtained to indicate that with proper development, oil of light gravity can be found in paying quantities in the third and fourth sands. Lester is a sawmill site, seven and one-half miles west from Camden, on a branch of the Iron Mountain Railroad. Oil and gas escapes are visible on the land. Lester is about 19 miles south of the Grayson-McLeod hot water well that attracted the attention of the scouts, and caused many to visit that locality. In another test, the same contractors are drilling for the Grayson-McLeod Lumber Company of St. Louis, in Dallas County, Arkansas. They were coring in limestone at 1,870 feet on January 22. At 1,600 feet they drilled into hot water which went over the derrick. It gave the crew a warm reception until they got the water cased off. This well is 45 miles south of Hot Springs, Arkansas. It looks good for both oil and gas, according to a late report.

p. 26. The Dallas Gas Company has accepted the terms of the franchise offered by the city authorities of Dallas, Texas, and the Lone Star Gas Company has telegraphed for pipe, with which to extend its main line from a point north of Fort Worth through the bottoms to Dallas. The rate under the Dallas franchise is 45 cents net per 1,000 feet.

p. 26. Houston wants natural gas from Louisiana. A committee appointed by the Houston Business League, composed of Secretary Boldt, City Commissioner Gaston, and Walker Ellis, of the F. W. Heetmann Company, spent January 21 and 22 inspecting the gas fields north of Shreveport, Louisiana, comprising the Mooringsport, Caddo, Oil City, Vivian, Lewis, and Hart's Ferry Districts, with the object of making recommendations preliminary to a movement for the construction of a gas line to Houston. A report endorsing the project was submitted by the committee, and steps will be taken immediately to work out the details of the proposition. It is stated unofficially, that the Texas Company interests may go into it, and that these interests and the business men of Houston may join, in carrying the matter to a successful conclusion. The line would be 250 to 260 miles long, and would cost not less than \$3,000,000. Artificial gas, supplied by the Houston Gas Company, costs the people of Houston \$1.15, net, per 1,000 feet. It is believed that the rate for natural gas could be fixed at around 50 cents, and that a good profit could be made out of the operation of the main line and distribution at this figure. The committee visited some 25 wells north of Shreveport, having a total capacity of 920,000,000 cubic feet per day. None of the wells showed less

than 15,000,000 cubic feet per day, and one producing from the 2,130-foot sand, was credited with 75,000,000 cubic feet per day, and a pressure of 1,000 pounds to the square inch. The Producers Oil Company, which is owned by the interests represented in The Texas Company, controls a large area of gas land north of Shreveport. It is reported that engineers will shortly be sent into the field to prepare estimates of cost and to figure out the route of the proposed line to Houston. An extension may also be surveyed to Galveston, 50 miles beyond Houston.

p. 27. Natural Gas Notes. The Lone Star Gas Company is supplying Wichita Falls, Henrietta, Byers, and Petrolia, in North Texas, with natural gas from the Petrolia, Clay County, Field, and within the next two months will be distributing gas in Bellevue, Bowie, Alvord, Sunset, Decatur, Rome, and Bridgeport, Texas.

As an inducement to manufacturing industries to locate at Henryetta, Oklahoma. The authorities of that hustling town offer natural gas at 3 cents per 1,000 feet. Henryetta is in Okmulgee County, Oklahoma, on the Frisco's Red River line.

p. 27-28. Natural gas for Arkansas cities. The Pulaski Gas Light Company of Little Rock, Arkansas, has accepted the terms of the franchise granted it by the city council of that city last month. Natural gas from the Caddo-Vivian Field in Louisiana will be piped to Little Rock, Pine Bluff, Gurdon, Prescott, Malvern, and other Arkansas cities by the Arkansas Natural Gas Company, and it is expected that the line will be completed and delivering gas by the end of the year. The Little Rock franchise runs for a term of 30 years, and the maximum domestic rate to be charged for natural gas is put at 45 cents, net, per thousand feet. The franchise in the other cities are along the same lines. The Arkansas Gazette of Little Rock on January 24 published the following: "The Dawes Company and the Arkansas Natural Gas company have effected an agreement for a consolidation of interests, which will give the combined company the control of over 120,000 acres of gas lands in the Caddo Fields, thus insuring Little Rock of a supply of natural gas which will last for years to come, according to former Congressman B. G. Dawes... We were well satisfied with our original holdings which embraced the very best gas lands in the Caddo District...they hoped to be supplying Little Rock by November or December of this year.....It will not be necessary to tear up the streets, as we will be able to use all the mains and pipes at present used in supplying artificial gas...It will require 225 miles of pipe to bring the gas to Little Rock.... According to Mr. Dawes, a 16-inch pipe will be laid for the first hundred miles from the gas field, and 12-inch pipe for the remainder of the distance. Hot Springs and Pine Bluff will be supplied with 8-inch branches from the main pipe line. A compressing station will be built at the point where the Hot Springs and Pine Bluff branch lines intersect with the main line, about 50 miles from Little Rock. Mr. Dawes states that the engineer's estimate of the amount of gas which the company will be able to supply the city is 30,000,000 cubic feet a day.....J.H. Maxon, the gas company's engineer, arrived in Little Rock last night to begin work on the plans for laying additional mains and pipes..... E. Chandler Beach, the present local manager of the Pulaski Gas Light Company, would continue in that position after the introduction of natural gas."

p. 28. Notes. A company composed of local people at Grannis, Arkansas, has leased over 5,000 acres of land near that place, and will test it for oil. The new 8-inch pipe line from Oklahoma to Baton Rouge, Louisiana, passes within a few miles of Grannis.

Vol. 8, No. 18, Feb. 20, 1910, p. 10-11. Oklahoma Oil Field Maps, compiled and for sale by F. A. Innes, Nowata, Oklahoma. Shallow sand oil field, Nowata and Rogers Counties, Oklahoma, T. 24-27 N., R. 16-17 E., giving allottees, roll numbers, 7,000 completed wells, scale 2 inches to the mile, 35 x 54 inches, blue line on white linen, \$5.00. Supplement, T. 28-29 N., R. 16-17 E., 25 x 30 inches, linen, \$2.50.

Map of Nowata County, Oklahoma, T 25-29 N, R 14-17 E., giving allottees,

roll numbers, wells, rural post offices, etc., 2 inches to the mile, 54 x 64 inches, on linen, \$10.00.

Bartlesville-Dewey-Copan Districts, Washington Co., Oklahoma, T. 26-29 N., R. 12-14 E., 2"=1 mile, 36x49", linen, \$5.00.

Caney River-Hogshooter District, Washington Co., T. 23-25 N., R. 12-14 E., 2"=1 mile, 36 x 41", linen, \$3.50.

Tulsa-Skiatook-Collinsville-Bird Creek-Flat Rock Districts, Tulsa and Osage Cos., Okla., T. 20-22 N., R. 12-14 E., 2"=1 mile, 36 x 41", linen, \$3.50.

Oklahoma Mid-Continent Oil and Gas Fields, T. 9-29 N., R. 8-21 E., 2-1/2 miles to the inch, 36 x 58", with 36 well records, linen, \$5.00.

Rogers Co., Oklahoma, giving allottees, roll numbers, towns, all wells, 2"=1 mile, 64 x 81", linen, \$15.00.

Glenn Pool, T. 16-19 N., R. 11-13 E., 2"=1 mile, 39 x 54", linen, \$5.00.

Okmulgee-Beggs District, T. 13-15 N., R. 11-13 E., including Hamilton Switch-Preston Pools, 2"=1 mile, 37 x 42", linen, \$3.50.

Coweta-Broken Arrow District, T. 16-19 N., R. 14-16 E., linen, \$5.00.

Haskell-Choska-Twin Hills District, T. 15-16 N., R. 14-16 E., 2"=1 mile, 30 X 38", linen, \$3.00.

Morris-Twin Hills-South Haskell District, T. 12-15 N., R. 14-16 E., 2"=1 mile, 40 x 57", linen, \$5.00.

Muskogee District, T. 13-15 N., R. 17-19 E., 2"=1 mile, 38 x 47", linen, \$5.00.

Madill, Marshall Co., T. 5-6 S., R. 5-6 E., 2"= 1 mile, 30 x 30", linen, \$2.50.

The above maps cover all the territory in Oklahoma where there has been any major active oil and gas development. My allotment maps were the first issued of the Oklahoma Mid-Continent Oil Fields, and have been kept up to date. Particular attention is given to the marking of all dry holes on all maps issued.

p. 24. Gas leases transferred to Arkansas Natural. Gas rights in nearly 12,000 acres of leases in northwestern Louisiana and southwestern Arkansas, scattered from the Mooringsport District south of Caddo, through the Caddo, Hart's Ferry, and Vivian Districts and north into Arkansas, have been transferred to the Arkansas Natural Gas Company, as follows: J. C. Trees Oil Company, 4,434 acres, mostly in Hart's Ferry District; H. S. Grayson, 760 acres; Foster B. Parriott, 6,010 acres, and T. N. Barnsdall, 699 acres, with eight completed gas wells. The Arkansas Natural Gas Company is prepared to lay a trunk line from the gas fields to various Arkansas cities, among them Little Rock, Pine Bluff, Hot Springs, Prescott, and Gurdon.

p. 26. Notes. The city officials of Prescott, Arkansas, have granted a 30-year franchise to the Arkansas Natural Gas Company, upon the condition that service will be given within two years' time. The gas company will build a 16-inch pipeline from the gas field at Vivian, Louisiana, north of Caddo.

p. 29. Tests in northeast Texas. The Producers Oil Company's test at Naples, Morris County, Texas, is down 2,800 feet and drilling in hard shale. The oil showing has not been so good since setting the liner. The gas pressure remains about the same. The driller's impression now is that the oil showing was obtained in the sand at about 2,350 feet. They intend drilling on to 3,000 feet unless oil is struck before reaching that depth. The Producers Company is also drilling a well about 8 miles northwest of Atlanta, in Marion County, Texas.

p. 33. Incorporated. Louisiana. Dunn Gas & Oil Company, of Little Rock, Arkansas, capital \$100,000, has been granted permission to operate in Louisiana.

Oklahoma. Southern Oil & Gas Co., of Madill, capital \$60,000. Incorporators, H. P. Haynes, Madill, R. P. McGeehan and J. R. Cunningham, both of Kansas City, Mo.

Western & Southern Oil & Gas Co., of Muskogee, capital \$10,000. Incorporators, R. G. Carpenter, E. W. Burdick, R. F. Martin, Jr.
 Mogul Oil Co., Tulsa, capital \$10,000. Incorporators, R. W. Kellough, Tulsa; M. L. Trubey, and George T. Guernsey, Independence, Kansas.
 The Globe Oil & Development Company, of Clinton, capital \$10,000. Incorporators, J. L. Avant, E. H. Boring, and C. W. Goodwin.
 Grove Oil, Gas, & Mineral Company, of Grove, capital \$10,000. Incorporators, John H. Gibson, William P. Mayes, and O. E. Williams.
 Southern Oil Company, of Bartlesville, capital \$250,000. Incorporators, D. A. Nowland, J. E. Talbott, and Pearl Severly.

p. 34. Oil Investors' Journal. Holland S. Reavis, editor and manager; B. A. Hagerman, advertising and circulation manager; John R. Reavis, Mid-Continent representative, Tulsa, Okla.; Charles H. Ball, eastern representative, 142 W. 11th St., New York City. Published on the 6th and 20th of each month, at 910-912 Texas Avenue, Houston, Texas. \$4.00 a year, plus \$1.00 postage.

Offices. Houston, Texas, Room 7, 910-1/2 Texas Avenue., Southwest Bldg.; Tulsa, Okla., Room 216, Central National Bank Bldg.; New York City, 142 W. 11th St., Charles H. Ball, representative; Pittsburgh, Pa., Room 9, 433 4th Avenue., David J. Berry, representative.

p. 34. California leads in number of new oil companies. This number of the Oil Investors' Journal contains a complete list of all oil and gas companies chartered in 1909 in California, Oklahoma, Illinois, Texas, Louisiana, and Missouri, with the authorized capital and names and addresses of incorporators in each instance. California leads in new companies, with nearly 400 to its credit. Oklahoma is second, with over 300; Texas has 39; Louisiana 29; Illinois 27; and Missouri 7.

p. 38. Notes. A. P. Dyke, of Hope, Arkansas, reports his test well near that place 1,245 feet in salt and pepper sand. Oil and gas in small quantity was found at about 1,150 feet. He has much faith in finding oil and gas at about 1,600 to 1,800 feet, or something like 2,000 feet. It is only about 50 miles from his well to the Caddo, Louisiana, Field, where oil and gas are found at from 2,000 to 2,400 feet. Surface indications where he is drilling are similar to those in the Caddo District.

p. 69. Santa Fe Railroad's Oklahoma and Texas oil operations. The Santa Fe Railroad drilled 9 wells in the Wheeler Field, near Ardmore, Oklahoma, in 1909, four being oil, four gas, and one dry. One of the gas wells was abandoned. The deep test No. 15, known as the California Well, was abandoned at 3,620 feet in December. This is one of the deepest wells ever drilled in Oklahoma. The well record at Wheeler to the end of last year follows:

Year	Completed	Oil	Gas	Gas-Oil	Dry
1906	8	3	0	3	2
1907	15	7	2	3	3
1908	4	0	1	3	0
1909	<u>9</u>	<u>4</u>	<u>4</u>	<u>0</u>	<u>1</u>
Total	36	14	7	9	6

Ardmore is getting natural gas from the Santa Fe wells at Wheeler, at the rate of about 2,000,000 feet a day, and there has been no trouble with the supply even during the extremely cold weather.

p. 70-73. Methods of prospecting, development, and appraisalment in the Mid-Continent Field, by Roswell H. Johnson. . . . The Mid-Continent Oil Field is relatively new, its active development dating only from 1903. The operators have been for the most part men from the Appalachian Field, recruited by frequent additions of Westerners new to the oil business. Prospecting. The most generally applicable rule in all oil prospecting is that of proximity to production. Early operators drilled near the 96th meridian, and were misled into believing that

there was a great 96th meridian pool, and that the key to success was the following of this meridian south. Leasing had followed the meridian nearly to the south boundary of the state, even in the greatly fractured Ouachita Mountains, where oil can never be found in commercial quantities....The area having the principal oil horizon at a workable depth is taken by operators to be the area included between the several pools. This method of judging of the general district is, however, faulty, since the oil at Hugo, Madill, Wheeler, Granite, Lawton, etc., are separated from the principal pool by an intervening territory of dissimilar nature. Appraisalment....The usual method is to obtain the land for a fixed bonus of 25 cents to \$4.00 an acre if risky, and a royalty, and annual rental from 25 cents to \$1.00 an acre every year. With better prospects, the bonus may be increased to \$300.00 or more where wells are close by.

- p. 76-79. Oil and Gas Companies chartered in Oklahoma in 1909.
 A.B.C.W. Oil & Gas Co., Muskogee, \$5,000. Incorporators, R. C. Armstrong, Jr., Muskogee; H. A. Beasley, Bartlesville; William O. Carr, Muskogee; David K. Widdersheim, Muskogee.
 Ada Oil & Gas Co., Ada, \$15,000. Incorporators, A. L. Beck, Tom Hope, F. E. Bowman. S. M. Torbett, all of Ada.
 Aganippe Oil Co., Muskogee, \$1,000. Incorporators, J. H. Sherman, Alluwe; William Inge, Independence, Kansas; John Ross, Independence, Kansas.
 The Albrecht Oil Co., Tulsa, \$50,000. Incorporators, J. W. Albrecht, Gulfport, Miss.; D. C. Acosta, Tulsa; E. J. Slater, Tulsa.
 Alcedo Oil Co., Bartlesville, \$25,000. Incorporators. A. S. Sutton, L. A. Rowland, Minnie B. Speck, all of Bartlesville.
 Amy Oil Co., Tulsa, \$10,000. Incorporators, James Bell, Ella Smith, Amy Lamb, all of Tulsa.
 Annex Oil & Gas Co., Tulsa, \$25,000. Incorporators, C. E. Strouvell, W. H. Bagley, Stanley M. Hirsh, all of Tulsa.
 Arkansas Valley Oil & Gas Co., Muldrow, \$50,000. Incorporators, R. J. Tallman, Fort Smith, Arkansas; W. L. McGee, Fort Smith, Arkansas; W. M. Blackard, Muldrow.
 Arthur Oil Co., Tulsa, \$50,000. Incorporators, Arthur B. Reese, J. A. Hull, W. H. Kiser, all of Tulsa.
 Argand Oil Co., Bartlesville, \$10,000. Incorporators, D. B. Mason, Thomas S. Lowry, C. T. Burnes, all of Bartlesville.
 Armstrong Oil Co., Bartlesville, \$10,000. Incorporators, D. B. Mason, C. T. Burns, C. A. Lamm, all of Bartlesville.
 The Aurora Oil & Gas Co., Tulsa, \$5,000. Incorporators, G. C. Probst, J. W. Carlstrom, David M. Hammett, all of Tulsa.
 Audrey Oil Co., Muskogee, \$12,000. Incorporators, M. E. Moore, L. B. Elyea, R. W. Leftwich, A. C. Trumbo, all of Muskogee.
 Avery Oil Co., Tulsa, \$5,000. Incorporators, A. W. Avery, J. C. McCready, George W. Kinney, all of Tulsa.
 The Aydellatte Oil Co., Tahlequah, \$25,000. Incorporators, Frank G. Martin, Tahlequah; B. P. Martin, Tahlequah; Paul Konz, Independence, Kansas.
 B
 The Baum Oil Co., Bartlesville, \$10,000. Incorporators, G. C. Adams and R. H. McGarvil, Bartlesville; J. C. McMahan, Anderson.
 Bay Oil Co., Bartlesville, \$10,000. Incorporators, Woodward G. Furry, Frank F. Finney, Thomas G. Forman, all of Bartlesville.
 Bettis Oil Co., Muskogee, \$10,000. Incorporators, George S. Ramsey, Muskogee; Ed Hirsh, Tulsa; C. L. Thomas, Tulsa.
 Big Oil Co., Sapulpa, \$40,000. Incorporators, B. C. Burnett, Joseph Bruner, L. B. Jackson, all of Sapulpa.
 Big 5 Oil & Gas Co., Tulsa, \$10,000. Incorporators, Cyrus S. Avery, Tulsa; Morris F. Knight, Vinita; John B. Thomason, Vinita.
 Big Jack Mining Co., Lincolnville, \$75,000. Incorporators, G. T. Pierson, Lincolnville; Theodore F. Morrow, Nevada, Mo.; S. Simon, Nevada, Mo.
 Bill Riley Oil Co., Nowata, \$3,000. Incorporators, J. J. Baylor, J. A.

Wettack, Joseph R. Rogers, E. S. Brown, all of Nowata.
 The Bitumen Co., Ravia, \$250,000. Incorporators, W. B. Tucker, Reagan;
 A. I. Chapman, Ravia; F. G. Streater, Dallas, Texas.
 Blarney Oil Co., Tulsa, \$25,000. Incorporators, D. C. Acosta, W. R.
 Sessions, R. E. L. Coon, all of Tulsa.
 The Blackwell Brick, Tile & Gas Co., Blackwell, \$50,000. Incorporators,
 J. W. Beaty, W. H. Thompson, Z. A. Harris, N. D. Kistler, all of Blackwell.
 Bristol Oil Co., Muskogee, \$5,000. Incorporators, J. G. Huber, A. W.
 Culp, H. H. Galbraith, all of Muskogee.
 Bromide Oil Co., Bromide, \$20,000. Incorporators, F. B. Stewart, Dale;
 G. W. Turley, Oklahoma City; H. J. Limm, Bromide.
 Brushton Oil Co., Nowata, \$10,000. Incorporators, H. G. Cheney, G. A.
 Cheney, J. Wood Glass, all of Nowata.
 The Bryan County Oil Co., Durant, \$12,000. Incorporators, Edward Rines,
 G. M. Rushing, J. B. Smith, W. E. Steinbock, all of Durant.
 The Byron & Cherokee Oil & Development Co., Cherokee, \$10,000.
 Incorporators, G. A. Stewart, C. B. Ghere, C. A. Stewart, all of Byron.

C

The Capitol Hill Gas & Electric Construction Co., Capitol Hill, Oklahoma
 City, \$5,000. Incorporators, O. W. Aubrey, W. L. Harmon, Capitol Hill; D. F.
 Solliday, Oklahoma City.
 Cache Valley Oil & Gas Co., \$10,000. Incorporators, L. D. Hough, J. D.
 Bradley, D. U. Esser, S. H. Blair, all of Walters.
 The Chaser Oil & Gas Co., Tulsa, \$10,000. Incorporators, E. F. Blaise,
 C. C. Simmons, C. J. Wrightsman, all of Tulsa.
 Chickasha Gas & Electric Co., Chickasha, \$175,000. Incorporators,
 Lawrence Martin, Dennis O'Brien, A. A. Humphrey, C. E. Ross, all of Chickasha.
 Choctaw Oil Co., Tulsa, \$7,000. Incorporators, D. C. Acosta, C. W.
 Deming, C. J. Acosta, all of Tulsa.
 Clella Oil Co., Muskogee, \$10,000. Incorporators, William A. Reid,
 William F. Wells, Cecil A. Shoenfelt, all of Muskogee.
 Comet Drilling Co., Bartlesville, \$5,000. Incorporators, W. H. Byron,
 D. A. Van Dyne, A. A. Smith, all of Bartlesville.
 Commonwealth Mining Co., Miami, \$40,000. Incorporators, M. L. Pierce,
 Walter Beck, George W. Beck, Jr., all of Miami.
 Colorado Oil Co., Muskogee, \$10,000. Incorporators, J. C. Culbertson,
 C. E. Buchanan, J. Garfield Buell, all of Muskogee.
 Coody Creek Pipe Line Co., Muskogee, \$5,000. Incorporators, J. H.
 Huckleberry, A. W. Culp, H. H. Galbraith, J. W. Zevely, all of Muskogee.
 Combination Oil & Gas Co., Muskogee, \$10,000. Incorporators, E. A.
 Young, Muskogee; A. C. Trumbo, Muskogee; A. Pence, Hitchita.
 The Columbus Oil & Gas Co., Sapulpa, \$10,000. Incorporators, Frank B.
 Sammes, S. J. Smith, George L. Myers, all of Sapulpa.
 Cooper Oil Co., Okmulgee, \$5,000. Incorporators, Eugene W. Gill, John
 B. Gill, George A. Johns, all of Okmulgee.

D

The David Oil Co., Bartlesville, \$20,000. Incorporators, F. E.
 Overfield, Wann; J. F. Overfield, Independence, Kansas; E. B. Huston,
 Independence, Kansas.
 Dawson Oil Co., Bartlesville, \$25,000. Incorporators, John S. Baird,
 James Brann, H. C. McClintock, all of Bartlesville.
 Delmar Oil & Gas Co., Henryetta, \$4,000. Incorporators, J. M. Wise,
 Henryetta; Marcus Simpson, Alluwe; H. Erle Wise, Joplin, Mo.
 Dominion Oil Co., Muskogee, \$100,000. Incorporators, H. H. Galbraith,
 Independence, Kansas; A. W. Culp, J. S. Givens, J. M. Givens, all of Muskogee.
 The Dorothea Oil Co., Muskogee, \$5,000. Incorporators, George W.
 Armstrong, Fort Worth, Texas; Frederick W. Wickett, Chicago, Ill.; R. C.
 Armstrong, Jr., Muskogee; William C. Carr, Muskogee.
 The Dudley Oil & Gas Co., Tulsa, \$10,000. Incorporators, George B.
 Harmon, E. F. Blaise, C. C. Simmons, all of Tulsa.

E

Ebony Oil Co., Muskogee, \$5,000. Incorporators, H. A. Beasley, Bartlesville; I. W. Patton, Muskogee; W. F. Boyd, Muskogee.

Edna Ray Mining Co., Miami, \$12,000. Incorporators, J. H. Christler, Childress, Texas; C. E. Crews, Nowata; W. E. Clapham, Vinita.

Ella Oil Co., Tulsa, \$12,000. Incorporators, James Bell, Ella Smith, Amy Lamb, all of Tulsa.

The El Reno Gas, Oil & Development Co., El Reno, \$10,000. Incorporators, A. W. Masson, T. J. Rasp, J. J. O'Donnell, all of El Reno.

Edwin C. Mining Co., Miami, \$5,000. Incorporators, J. H. Christler, Childress, Texas; C. E. Crews, Nowata; W. E. Clapham, Vinita.

The Empress Oil Co., Tahlequah, \$25,000. Incorporators, Frank G. Martin, Tahlequah; B. P. Martin, Tahlequah; Paul Konz, Independence, Kansas.

Enterprise Oil & Gas Co., Okmulgee, \$10,000. Incorporators, Lex V. Dickard, Okmulgee; John M. Jigler, Cach; William C. Newman, Okmulgee.

The Erick Oil, Gas & Mineral Co., Erick, \$10,000. Incorporators, J. D. Warford, Erick; O. K. Thurmond, Erick; J. W. Teams, Oklahoma City.

Esther Mining & Milling Co., Miami, \$10,000. Incorporators, C. W. Arnold, A. C. Wallace, H. L. Marshall, all of Miami.

Ethelyn Oil & Gas Co., Henryetta, \$10,000. Incorporators, J.B. Swan, Henryetta; R. S. Litchfield, Independence, Kansas; John Smith, Independence, Kansas.

F.

The Flora Oil & Development Co., Hugo, \$25,000. Incorporators, Fred Krey, St. Louis, MO.; L.A. Engel, St. Louis, Mo.; Carl Kreauter, Hugo.

Fox Oil & Gas Co., Mounds, \$10,000. Incorporators, A. L. Funk, Mounds; Robert T. Boone, Muskogee; George C. Butte, Muskogee.

The Frederick Oil & Gas Co., Frederick, \$10,000. Incorporators, A. R. Cotton, J. L. Lair, John G. Eberle, all of Frederick.

G.

The Gaston Oil Co., Nowata, \$100,000. Incorporators, John H. Gaston, Dallas, Texas; J. W. Halsell, Dallas, Texas; W. A. Chase, Nowata.

Georgie Belle Oil Co., Muskogee, \$12,000. Incorporators, R. W. Leftwich, M. E. Moore, L. B. Elyea, all of Muskogee.

Gem Oil & Gas Co., Vinita, \$10,000. Incorporators, J. F. Gaston, Amos Stoalbarger, C. R. Holloway, J. J. Robinson, all of Vinita.

The Glassey Oil Co., Madill, \$10,000. Incorporators, J. L. McMahon, Nowata; J. A. Wettack, Nowata; Phil Beard, Coffeyville, Kansas.

The Goodwell Oil Co., Muskogee, \$10,000. Incorporators, H. E. Roberts, L. C. Decius, A. Moffitt, all of Muskogee.

Gourd Oil & Gas Co., Nowata, \$9,000. Incorporators, F. W. Galer, H. W. Reed, Fred S. Rowe, B. G. Dowell, all of Nowata.

Grant Country Oil, Gas & Mineral Co., Jet, \$25,000. Incorporators, C.M. Owen, Florence; E.P. Carey, Jet; D.W. Owings, Jet.

Gulf Pipe Line Co. of Oklahoma, Tulsa, \$1,000,000. Incorporators, W.A. Mellon, Pittsburgh, Pa.; F. A. Leovy, Tulsa; James B. Diggs, Tulsa.

H

The Halstead Underwood Oil & Gas Co., Tishomingo, \$25,000. Incorporators, B. Halstead, Tishomingo; D. F. Underwood, Tishomingo; A.E. Williford, Fillmore.

Hayes Oil & Gas Co., Muskogee, \$5,000. Incorporators, William J. Anicker, Mildred K. Anicker, Chris. M. Bradley, all of Muskogee.

Hamilton Petroleum Co., Muskogee, \$100,000. Incorporators, George C. Butte, Garfield Johnson, Sadie Fortson, all of Muskogee.

The Hattie Oil & Gas Co., Bartlesville, \$10,000. Incorporators, Bart B. Benefiel, H. Morse, Charles Awrey, all of Bartlesville.

The Henry Oil Co., Okmulgee, \$10,000. Incorporators, D.W. Henry, Terre Haute, Ind.; E. L. Talman, Okmulgee; W. B. Pine, Okmulgee.

Hobart Gas & Fuel Co., Hobart, \$10,000. Incorporators, Winfield S. Pryor, Hobart; Nora M. Pryor, Hobart; William F. Yeakie, Fort Scott, Kansas.

The Hominy Oil & Gas Co., Tulsa, \$16,000. Incorporators, E. F. Blaise, H. B. Taggart, Amy Lamb, all of Tulsa.

The Hunter Gas, Oil, Fuel & Development Co. Hunter \$4,000. Incorporators,

O. G. Horton, Hunter; J. Chevalier, Breckinridge; McC. Race, Hunter; S.P. Thomas, Hunter.

I.

Iskegwa Oil & Gas Co., Nowata, \$10,000. Incorporators, Charles F. Noble, president; Bert M. Cromack, vice-president; J.C. Sproull, secretary; A.A. Warner, treasurer, all of Nowata.

The Iron Mountain Oil & Land Investment Co., Norman, \$25,000. Incorporators, J. Paul Idly, Oklahoma City; Joseph C. Minter, Norman; John Taylor, Norman; W. A. Barkyoub, Kansas City, Missouri.

J.

Jessie Oil Co., Tulsa, \$5,000. Incorporators, A. F. Ault, L. J. Martin, T. D. Lyons, all of Tulsa.

The Johnston County Oil & Development Co., Tishomingo, \$15,000. Incorporators, George Vannoy, S. M. Sargent, C. W. Peavey, all of Tishomingo.

Junior Oil & Gas Co., Okmulgee, \$35,000. Incorporators, Thomas A. Bell, Okmulgee; Robert Emmett Rea, Okmulgee; T. A. Johnston, Morris; L.S. Bagley, Morris.

K.

Kate Oil Co., Okmulgee, \$10,000. Incorporators, A. F. Boone, W. L. McKee, D. C. McKee, all of Okmulgee.

The Keith Oil & Gas Co., Lenapah, \$10,000. Incorporators, C. M. Keith, Lenapah; S. E. Keith, Lenapah; W. L. Keith, Delaware; J. H. Keith, Coffeyville, Kansas.

The Kee-too-wah Oil Co., Tahlequah, \$25,000. Incorporators, Frank G. Martin, B. P. Martin, Tahlequah; Paul Konz, Independence, Kansas.

Kelley Oil Co., Ramona, \$20,000. Incorporators, J. A. Smith, Chesterhill, Ohio; J. A. Bingham, Ramona; A. H. Donaldson, Ramona.

The Kenton Oil & Gas Co., Kenton, \$5,000. Incorporators, L. A. Wikoff, A. S. Palmer, T. H. Rixey, J. W. Wiggins, All of Kenton.

The Kokomo Oil Co., Tahlequah, \$20,000. Incorporators, Frank G. Martin, B. P. Martin, Tahlequah; J. F. Crawford, Independence, Kansas.

Kreps Oil & Gas Co., Tulsa, \$10,000. Incorporators, R. H. Shrewsbury, R. P. Elliott, W. H. Reese, all of Tulsa.

L.

The Lamar coal, Oil & Gas Development Co., Lamar, \$10,000. Incorporators, B. F. Powell, W. D. Atkins, H. D. Mitchell, E. M. Washington, all of Lamar.

The Lamont Gas & Oil Co., Lamont, \$5,000. Incorporators, Ed Chaney, Salt Fork; John Cowen, Eddy; Ed Gillis, Lamont.

Larc Oil Co., Tulsa, \$32,000. Incorporators, H. Luedinghaus, Jr., St. Louis, MO.; A. H. Reller, St. Louis, Mo.; H. W. Anders, Tulsa; M. S. Cory, Tulsa.

Little Diamond Oil Co., Nowata, \$50,000. Incorporators, W. B. Tucker, Coffeyville, Kansas; T. C. King, H. G. Garnett, Nowata.

M.

Mark Oil Co., Okmulgee, \$15,000. Incorporators, E. T. McDowell, Wright Thornburg, W. E. Wood, R. C. Winslow, William C. Newman, all of Okmulgee.

McAlester Gas Light Co., McAlester, \$500,000. Incorporators, Frank G. Deane, Dwight Smith, Grand Rapids, Michigan; W. G. Weimer, McAlester.

McAlester Oil & Gas Co., McAlester, \$12,000. Incorporators, W. B. Riley, W. L. Wooley, G. L. Miller, G. C. Cockrum, all of McAlester.

McGee Valley Oil Co., McAlester, \$100,000. Incorporators, Arnold C. Saportas, New York City, N.Y.; John E. Cavanaugh, McAlester; James C. Wilkinson, McAlester.

Malvern Oil Co., Nowata, \$10,000. Incorporators, H. G. Cheney, E. K. Cheney, J. Wood Glass, all of Nowata.

The Mabel Oil Co., Okmulgee, \$3,000. Incorporators, George T. Priest, St. Louis, Mo.; William Grayson, St. Louis, Mo.; Thomas A. Bell, Okmulgee.

Marcus Oil & Gas Co., Henryetta, \$4,000. Incorporators, C. F. Speary, J. H. Pringle, Charles Richardson, all of Tulsa.

Mayson Oil Co., Tulsa, \$10,000. Incorporators, H. W. Anders, Tulsa; J. S. Givens, Muskogee; P. B. Macoughtry, Muskogee.

Maryland Oil Co., Muskogee, \$10,000. Incorporators, J. M. Givens, A. W. Culp, Felix L. Gast, all of Muskogee; H. W. Anders, Tulsa.

Merchants Oil Co., Muskogee, \$10,000. Incorporators, Ezra F. Blanchard, Charles T. Madison, Frank Warren, all of Muskogee.

The Milroy Oil & Gas Co., Okmulgee, \$50,000. Incorporators, David E. Milroy, Joseph A. Milroy, William K. Milroy, Frederick T. Milroy, all of Muskogee.

The Milton Oil Co., Muskogee, \$10,000. Incorporators, William S. Harsha, Clayton L. Stoner, John H. Elton, William D. Ford, all of Muskogee.

The Mingo Oil & Gas Co., Tulsa, \$10,000. Incorporators, R. W. Kellough, G. L. Reed, D. L. Swift, all of Tulsa.

Miller-Eakins Oil & Gas Co., Madill, \$25,000. Incorporators, A. G. Eakins, Madill; G. D. Miller, Sherman, Texas; W. W. Brige, Sherman, Texas.

Min-nell Oil & Gas Co., Nowata, \$9,000. Incorporators, F. W. Galer, H. W. Reed, Fred S. Rowe, B. G. Dowell, all of Nowata.

Mission Oil Co., Holdenville, \$300. Incorporators, J. D. Boxley, Frank L. Warren, Charles W. Miller, all of Holdenville.

Mook Oil & Gas Co., McAlester, \$50,000. Incorporators, Walter A. Hinchman, Kansas City, MO.; William B. Moore, McAlester; E. Allen Boyd, McAlester.

The Moore Gas Co., Nowata, \$20,000. Incorporators, M. R. Moore, E. C. Dickerman, Mildred Dickerman, all of Nowata.

Moore Oil Co., Muskogee, \$10,000. Incorporators, M. E. Moore, L. B. Elyea, R. W. Leftwich, all of Muskogee.

Muskogee Refining Co., Muskogee, \$150,000. Incorporators, J. W. Dowd, Chicago, Ill.; John F. Champion, Muskogee; Carl Pursel, Muskogee.

N.

Niagara Oil Co., Bartlesville, \$150,000. Incorporators, Roswell H. Johnson, Paul R. Johnson, A. E. Carver, all of Bartlesville.

O.

Oakwood Oil & Gas Co., The, Tulsa, \$10,000. Incorporators, R. W. Kellough, Guy L. Reed, D. L. Swift, all of Tulsa.

Ohio Drilling Co., Sapulpa, \$9,000. Incorporators, J. C. Cutchall, F. S. Markham, W. A. Wise, of Sapulpa; James E. Wade, J. E. Crosbie, Tulsa.

Oklahoma Drilling Co., Muskogee, \$10,000. Incorporators, Alex McGilvray, Frank Wolf, E. B. Miller, Homer Needles, all of Muskogee.

Oklahoma Lead & Zinc Mining & Milling Co., The, Miami and Guthrie, \$100,000. Incorporators, J. S. Mabon, L. C. Church, G. L. Blincoe, all of Miami.

Oklahoma Oil & Gas Co., Tulsa, \$10,000. Incorporators, D. C. Oyster, Lexington, Ky.; J. P. Glenn, Lexington, Ky.; Charles Richardson, Tulsa.

Oklahoma Pipe Line Co., Muskogee, \$2,500,000. Incorporators, James A. Moffett, New York County, N. Y.; H. C. Folger, Jr., Nassau Co., N.Y.; J. L. Havis, Muskogee.

Oklahoma Oil & Gas Co., Ardmore, \$10,000. Incorporators, S. A. Apple, Roy M. Johnson, Charles von Weise, Wirt Franklin, all of Ardmore.

Okmulgee Mining Co., Okmulgee, \$35,000. Incorporators, L. B. Norton, B. W. Christian, J. B. Wheeler, W. M. Scott, all of Muskogee.

Okmulgee Pipe Line Co., Okmulgee, \$10,000. Incorporators, L. Hamblen, J. H. Huckleberry, H. L. Leever, all of Muskogee.

Onyx Oil Co., The, Muskogee, \$40,000. Incorporators, Robert Wrigley, William Readicker, Iola, Kansas; F.B. Jackson, Muskogee; P.J. White, Tulsa.

Ora-Pierce Oil Co., Oklahoma City and Helena, \$25,000. Incorporators, O. A. Brewer, G. N. Kneeland, Helena; Pierce Larkin, Norman.

Ore Hill Oil Co., Okmulgee, \$10,000. Incorporators, John H. Rebold, E. T. McDowell, R. C. Winslow, all of Okmulgee.

Orel Oil Co., Henryetta, \$24,000. Incorporators, D. A. Bartlett, Marietta, Ohio; J. B. Swan, Henryetta; J. Belford, Okmulgee.

Otex Oil Co., The, Tulsa. \$10,000. Incorporators, D. R. Fant, J. N. Groesbeeck, Jr., A. L. Lamb, all of Tulsa.

Otter Oil & Gas Co., The, Chelsea, \$10,000. Incorporators, J. W. Swarts, G. A. Tibbs, A.E. Paulger, all of Chelsea.

P.

Pacific Oil & Gas Co., The, Bartlesville, \$5,000. Incorporators, Charles W. Pennel, P. A. Sompayrac, Robert F. Coil, all of Bartlesville.

Pascova Oil Co., Muskogee, \$5,000. Incorporators, W. F. Smith, J. H. Mobley, George D. Rodgers, all of Muskogee.

Pigua Oil Co., The, Tulsa, \$25,000. Incorporators, F. B. Ufer, R. W. Kellough, G. L. Reed, all of Tulsa.

Pittman Oil Co., Chelsea, \$10,000. Incorporators, J. O. Pittman, C. F. Martin, C. R. Armstrong, all of Chelsea.

Placer Mining & Development Co., The, McAlester, \$50,000. Incorporators, A. B. Ringland, E. P. Hill, A. W. Ringland, all of McAlester.

Poland Gas & Oil Co., The, Ardmore, \$25,000. Incorporators, W. P. Poland, Joe. F. Robison, George Dashner, C. L. Byrne, all of Ardmore.

Producers Oil Reduction Co., Muskogee, \$12,000. Incorporators, Max E. Moore, Louis B. Elyea, Ralph W. Leftwich, Charles T. Madison, all of Muskogee.

Progress Oil Co., Chelsea, \$30,000. Incorporators, Isaac Cohn, M. M. Cohn, David Cohn, Chelsea; H. W. Marcus, Olean, New York.

Prospect Oil Co., Ardmore, \$25,000. Incorporators, John S. Cadel, Joe F. Robison, Harold Wallace, all of Ardmore.

Q.

Quapaw Fuel Oil Co., Chelsea, \$15,000. Incorporators, C. R. Armstrong, E. M. Corah, D. E. Kneedler, all of Chelsea.

Queen Oil Co., Okemah, \$7,000. Incorporators, J. G. Potter, R. A. Dill, C.T. Huddleston, L. A. Nye, W. C. McIntosh, all of Okemah.

R.

Raleigh Mining & Investment Co., Lawton, \$100,000. Incorporators, Dwight D. Currie, William C. Connett, George E. Mix, all of St. Louis, Mo.

Recruit Oil Co., Bartlesville, \$10,000. Incorporators, Andrew Urban, George W. Swarger, D. B. Mason, all of Bartlesville.

Regal Gas Co., The, Muskogee, \$20,000. Incorporators, L. A. Lockwood, E. J. Lambert, Independence, Kansas; H. R. Denton, Muskogee.

Rock Creek Oil & Mineral Co., The, Ravia, \$25,000. Incorporators, J. E. Williams, Ravia; R. H. Waggener, Dallas, Texas; A. M. White, Dallas, Texas.

Ruffin Oil & Gas Co., The, Muskogee, \$10,000. Incorporators, J. S. Weeks, John L. Wisener, J. A. Scott, all of Muskogee.

Ryan Oil & Gas Co., Tulsa, \$10,000. Incorporators, Edward C. Ryan, Tulsa; Emma C. Ryan, Tulsa; William C. Christie, New York City, N.Y.

S.

Sand Creek Gas & Oil Co., The, Byron, \$5,000. Incorporators, W. H. Millspaugh, Amorita; J. D. Howard, Byron; J. M. Gaume, Byron; A. J. Titus, Cherokee.

St. Lawrence Oil Co., Tulsa, \$10,000. Incorporators, E. R. Perry, Marion Dickerman, Mildred Dickerman, all of Tulsa.

Sandusky Oil & Gas Co., The, Tulsa, \$10,000. Incorporators, R. W. Kellough, J. M. Clover, J. E. Wade, all of Tulsa.

Scioto Oil Co., The, Tulsa, \$10,000. Incorporators, R. W. Kellough, J. E. Wade, Guy L. Reed, all of Tulsa.

Shippen Oil Co., Muskogee, \$10,000. Incorporators, George J. Kobusch, Edward H. Gorse, St. Louis, Mo.; J. Blair Shoenfelt, Charles A. Weil, Cecil E. Shoenfelt, all of Muskogee.

States Oil & Gas Co., Bartlesville, \$15,000. Incorporators, A. J. Cadaghan, W. J. Livingston, Bartlesville; E. J. Lambert, Independence, Kansas.

Stevirmac Oil & Gas Co., Sapulpa, \$25,000. Incorporators, H. H. McFann, S. S. Owen, Virgil Hicks, all of Sapulpa.

Stratford Oil & Gas Co., Marietta, \$35,000. Incorporators, B. V. Cummins, Waurika; D. W. Cummins, Waurika; W. R. J. Stratford, Marietta.

Sweetwater Oil, Gas, Coal, Lead, Zinc & Fuel Co., The, Sweetwater, \$20,000. Incorporators, J. M. Faris, Sayre; S. J. Coburn, Frank Banks, J. W. Ginn, Sweetwater; U. A. Albin, Harrington.

T.

Talala Oil Co., Chelsea, \$6,000. Incorporators, W. B. Stephenson, E. V. Bedford, W. W. Lockhart, all of Chelsea.

Talladega Oil & Gas Co., The, Ardmore, \$50,000. Incorporators, G. W. Bingham, L. T. Coyle, H. C. Bingham, all of Ardmore.

Tesca Oil Co., The, Tulsa, \$12,000. Incorporators, P. J. White, Tulsa; E. B. Huston, Tulsa; Claude Miller, Independence, Kansas.

Tishomingo Oil & Gas Co., The, Tishomingo, \$25,000. Incorporators, A. Boyd, C. B. Thomas, C. B. Burrows, all of Tishomingo.

Togo Oil Co., Tulsa, \$10,000. Incorporators, Cyrus S. Avery, Essie M. Avery, Tulsa; Fred S. Walker, Claremore.

Transcontinental Oil, Gas & Coal Co., Tulsa, \$50,000. Incorporators, S. Glenn Brown, H. W. Nash, Charles T. Reuter, all of Tulsa.

Triumph Oil & Gas Co., The, Nowata, \$10,000. Incorporators, George E. Woodward, Nowata; D. F. Craig, Independence, Kansas; William C. Wood, Nowata.

Tri-State Oil Co., Tulsa, \$50,000. Incorporators, Charles D. Hill, Tulsa; Eugene Constatin, Lockport, Louisiana; J. A. Landry, New Orleans, Louisiana.

Tuna Creek Oil Co., Sapulpa, \$25,000. Incorporators, James P. Flanagan, Harry W. Jones, Independence, Kansas; Walter Bovaird, William A. Bovaird, Sapulpa.

Tulsa Petroleum Co., The, Tulsa, \$10,000. Incorporators, J. M. Clover, R. W. Kellough, G. L. Reed, all of Tulsa.

Twin State Oil Co., The, Ardmore, \$10,000. Incorporators, J. Edgar Pew, Beaumont, Texas; H. H. Cole, Shreveport, Louisiana; L. S. Coleman, Ardmore.

U.

Utility Gas & Electric Co., El Reno, \$1,000,000. Incorporators, H. H. Stephens, W. H. Cruley, C. C. McVay, F. W. Can New, Lyda McBryde, all of El Reno.

Utility Oil & Gas Co., The, Dewey, \$10,000. Incorporators, Fred B. Woodard, B. A. Lewis, C. Earl Woodard, all of Dewey.

V.

Vera Gas Co., Vera, \$25,000. Incorporators, W. J. Long, James A. Veasey, L. A. Rowland, all of Bartlesville.

Vulcan Oil Co., Muskogee, \$25,000. Incorporators, J. M. Givens, J. S. Givens, P. B. Macoughtry, all of Muskogee.

W.

Ward Oil & Gas Co., Chelsea, \$10,000. Thomas C. Laney, Lima; Harry C. Wieble, Coffeyville, Kansas; Charles F. Hart, Dewey.

Washita Valley Oil & Gas Co., The, Chickasha, \$25,000. Incorporators, Joel C. Smith, I. H. Harness, E. H. Peery, Thomas J. O'Neill, H. B. Johnson, J. P. Sparks, O. S. Penny, E. A. Peyton, Jacob Lerenson, F. E. Riddle, R. F. Thweatt, all of Chickasha.

Washita River Oil, Gas & Mineral Co., The, Ravia, \$25,000. Incorporators, W. W. Kuhn, M. D. Frye, Dallas, Texas; Z. M. White, W. E. Underwood, Ravia.

Watkins Gas Co., Comanche, \$25,000. Incorporators, G. A. Kincaid, A. S. Peck, Comanche; F. E. Watkins, Oklahoma City.

Wayne Oil & Gas Co., Muskogee, \$50,000. Incorporators, George Robinson, E. J. Lambert, Independence, Kansas, H. R. Denton, Muskogee.

Weil Oil Co., Muskogee, \$50,000. Incorporators, Charles A. Weil, J. M. Givens, D. E. Shoaff, all of Muskogee.

Westchester Oil & Gas Co., Tulsa, \$50,000. Incorporators, B. Rabinovitz, Tulsa; L. Klein, Yonkers, New York; A. Shapiro, Yonkers, New York.

West Penn Oil & Gas Co., Okmulgee, \$10,000. Incorporators, W. E. Wood, E. W. Gill, B. T. Buchanan, all of Okmulgee.

Western Oil Station Co., Sapulpa, \$5,000. Incorporators, W. J. Collier, Tulsa; W. R. Douglas, J. Harvey Smith, Sapulpa.

White Seal Oil Co., Tulsa, \$6,000. Incorporators, A. Miller Hammett, J. I. Gillespie, M. J. Hollis, all of Tulsa.

Wildrose Oil Co., The, Tahlequah, \$25,000. Incorporators, Frank G. Martin, B. P. Martin, Tahlequah; Ernest B. Huston, Independence, Kansas.

Winn Oil Co., The, Tulsa, \$15,000. Incorporators, P. J. White, Tulsa; Claude Miller, E. B. Huston, Independence, Kansas.

Wise Oil & Gas Co., Holdenville, \$48,000. Incorporators, E. Autrey,

Holdenville; Marcus Simpson, Alluwe; H. Erie Wise, Joplin, Missouri.

Wood Oil Co., Muskogee, \$25,000. Incorporators, S. T. Mallory, H. J. Connolly, Muskogee; C. T. Hiteshew, Parkersburg, West Virginia.

Worth Oil Co., Tulsa, \$100,000. Incorporators, Harry Heasley, Pittsburgh, Pa.; Randolph Shirk, A. W. Leonard, Tulsa.

Woodhull Oil Co., Bartlesville, \$25,000. Incorporators, Charles E. Jennings, J. K. Robb, John A. Bell, Jr., all of Bartlesville.

Y

Yuma Oil Co., Muskogee, \$50,000. Incorporators, Charles A. Weil, M. E. Moore, R. W. Leftwich, D. E. Shoaff, J. M. Givens, all of Muskogee.

Yellow Label Oil Co., Tulsa, \$6,000. Incorporators, A. Miller Hammett, J. I. Gillespie, M. J. Hollis, all of Tulsa.

p. 87. Good gas field developed in north Texas. In the North Texas districts, Petrolia (Clay County), Powell, and Corsicana, 111 oil wells and 14 gassers were completed, and the new production obtained was 1,177 barrels a day, or an average of 10.8 barrels a day per well. The 1908 record was 57 producers and 3 gassers, the oil wells having an initial output of 1,127 barrels or an average of 19.8 barrels a day per well each. Corsicana completed only 5 wells, 4 being producers with 25 barrels per day initial output and 1 dry. Powell completed 87 oil wells and 3 gassers, the new production obtained being 668 barrels per day or 7.8 barrels per day per well.

Petrolia, also known as Henrietta, Clay County, furnished the only important North Texas development in 1909. Eleven gas wells were completed in this district during the year, located over an area several square miles in extent. One of these showed a capacity of 40,000,000 cubic feet of gas per day and was beyond control for some time after being drilled in. The others, with two or three exceptions, are strong wells, all being completed below 1,400 feet and on down to 1,740 feet.

The Lone Star Gas Company in 1909 laid a 16-inch gas line to Fort Worth, a distance of 110 miles, and is now laying a 12-inch line from the main line to Dallas. Gas from Petrolia will be furnished Fort Worth consumers by March 1, if no unforeseen delay prevents, and Dallas will have natural gas within 60 days.

Twenty oil wells were completed at Petrolia in 1909, with 484 barrels initial output, or 24 barrels per day per well, as compared with 19 barrels a day per well in 1908 and 713 barrels per day of new production, or 38 barrels a day per well.

p. 91. Oil and gas companies chartered in Texas in 1909. (North Texas only).

Big Six Oil Co., Corsicana, \$15,000. E. R. Brown, Ralph Beaton, A. Ferguson, W. F. Colquitt, John Garner, Harrold Talley, all of Corsicana.

Buzzard Springs Oil & Gas Co., Dallas, \$5,000. Jno. G. Hunter, W. H. Gaston, William Kelley, A. C. McNabb, W. W. Bowen, all of Dallas.

Castles Oil Co., Corsicana, \$24,000. T. P. Kerr, Mrs. C. M. Castles, Corsicana; A. W. Hamil, Beaumont.

Clem-Ballard Oil Co., Dallas, \$20,000. James A. Ballard, A. W. Clem, Thomas R. Tennant, all of Dallas.

The A. R. Horn Oil Co., Corsicana, \$2,000. A. R. Horne, Kerens; B. L. Norred and L. H. Carroll, Corsicana.

Matagorda Oil & Gas Co., Dallas, \$10,000. W. H. Featherson, Henrietta; John N. Simpson, Royal A. Ferris, Dallas.

Sherman Oil Co., Sherman, \$15,000. C. T. Freeman, Charles Batsell, W. H. Chisholm, all of Sherman.

Texarkana Gas & Oil Co., Texarkana, \$10,000. J. E. Morris, M. D.

Tilson, J. E. Blackburn, W. P. Hudgins, A. J. Offenhauser, F. W. Offenhauser, T. A. Sims, all of Texarkana.

Trinity River Oil Co., Liberty, \$10,000. W. N. Bullard, Dayton; William P. Ellison, Dallas; C. F. Stevens, Liberty.

Vernon Gas & Oil Co., Vernon, Wilbarger Co., \$10,000. R. R. Kelley, L. G. Hawkins, T. J. Youngblood, all of Vernon.

p. 91. Wildcat Notes. The Producers Oil Company's test near Jacksboro, in Jack County, Texas, is 1,600 feet deep.

p. 108. Trade Notes, F. A. Innes, pioneer Oklahoma mappist and specialist in oil properties. For four years, F. A. Innes, of Nowata, Oklahoma, real estate broker and specialist in producing oil properties, has been regarded as authority in his particular field. Mr. Innes is the pioneer mapist of the oil fields of Oklahoma, and his work along this line is used by the Union Agency for checking oil field development, and is accepted by the United States Geological Survey as complete and authentic. This feature is in a measure responsible for the fact that Mr. Innes' knowledge of oil field matters in general is regarded as a comprehensive, detailed, and accurate. Making a specialty of oil lands and leases, he is at once prepared to show investors the cream of the bargains and openings in the Mid-Continent Field, and to answer all questions, and supply all information relative thereto from a professional standpoint. Four years intimate knowledge of this locality and its resources has placed Mr. Innes in a position to speak authoritatively on the resources of the region. He is prepared to offer advice and information that would take weeks to secure from other sources. His offices are located at Rooms 14 and 15, Lawson Building, Nowata...Mr. Innes pays especial attention to producing properties in the shallow sand oil field of Nowata County, where the profits in oil production have probably been greater in proportion to the investment than in any other section of the Oklahoma oil region.

p. 111. Obituary. Mrs. Margaret McMahon. Mrs. Margaret McMahon, mother of D. F. McMahon and J.C. McMahon of the Louisiana Company, with headquarters at Shreveport, and T. J. McMahon, oil dispatcher for The Texas Company, Houston, and John L. McMahon, Nowata, Okla., died at her home in Karns City, Pennsylvania, on Feb 5, 1910, after an illness of several months from valvular heart trouble. Her sons in the Southwest went to her bedside late in January and were with her at the end. Four other children and her husband survive her. Mrs. McMahon was 69 years old. She was born in Ireland, and at an early age came to this country, living first in Cincinnati, then at Titusville, and finally at Karns City, which had been her home 35 years. She was a devoted wife and mother, and is mourned not only by her family, but by a wide circle of friends who loved her.

p. 111. Tests for oil in Louisiana and Arkansas. The Clifford Company is drilling a test for oil on the Grayson-McLeod Lumber Company's land in Dallas County, Arkansas. Several sand, limestone, and shell formations have been penetrated in this hole, and some shale, which were saturated with oil. At 1,600 feet, hot water under heavy pressure was found. About \$60,000 has been expended here in the attempts to make wells with cable tools, but none went to a determining depth. A rotary is now being used.

p. 111. Louis Paulhan in his biplane at South Houston on February 18. Paulhan made a number of flights at South Houston on February 18, 19, and 20. The picture shows the aviator seated in his machine just before starting on one of his flights. Photo by K. W. McDonald.

Vol. 8, No. 19, March 6, 1910, p. 14. Missouri's gas consumption last year exceeded eighteen billion cubic feet. Missouri cities and towns consumed last year for fuel and illumination nearly \$7,700,000 in natural and manufactured gas, according to figures obtained by the state labor bureau, which is \$500,000 more than in 1908, or 18,350,000,000 cubic feet, a gain of over 100,000,000 cubic feet over 1908. In all, 196,928 households, stores, factories, and miscellaneous places used gas for either lighting, cooking, heating, or power. For manufactured gas, the consumers amounted to 133,159 places, and for natural gas 63,769 places. Natural gas was confined to Kansas City, St. Joseph, Webb City, Carterville, Joplin, Carl Junction, Rich Hill, Oronogo, and Belton, with Kansas City using 6,686,800,000 cubic feet by 44,490 consumers, St. Joseph using 2,669,195,500 cubic feet by 10,584

consumers, Joplin using 1,506,962,000 cubic feet by 5,515 customers, and Webb City and Cartersville using 2,130,114,600 cubic feet by 2,530 consumers.

St. Louis was and is the largest consumer of manufactured gas, with 114,940 consumers using 4,004,626,000 cubic feet in the year 1908. Next came Springfield with 3,320 consumers using 88,991,000 cubic feet, then Sedalia with 970 consumers using 27,147,300 cubic feet, Jefferson City with 937 consumers using 21,000,000 cubic feet; Hannibal with 1,100 consumers using 23,237,500 cubic feet, St. Charles with 1,200 consumers using 20,000,000 cubic feet, Independence with 800 consumers using 16,542,900 cubic feet, Brookfield with 640 consumers using 11,813,000 cubic feet, and Kirksville with 600 consumers using 11,200,000 cubic feet. In the towns and suburbs of St. Louis County, there were 3,931 consumers using 83,183,200 cubic feet. Many of the gas generating stations in Missouri are run in connection with electric light plants, but no electricity figures are included. In Kansas City and St. Joseph, natural gas has entirely taken the place of the manufactured kind.

p. 20. Incorporated. Oklahoma. The Big State Oil Co., of Oklahoma City, capital \$10,000. Incorporators, E. A. Sterling, A. F. Goebel, W. A. Goebel, and M. L. Sterling.

The Creek Refining Co., of Okmulgee, capital \$40,000. Incorporators, E. E. Andrews, W. T. Wilson, E. W. Gill, and others.

Wapa Oil & Development Co., of Wapanucka, capital \$15,000. Incorporators, R. E. Smith, R. E. Rea, both of Okmulgee, Okla., and B. Statler.

Dayton Oil & Gas Co., of Sapulpa, capital stock \$25,000. Incorporators, D. L. Grimm, Sapulpa, T. E. Farr and C. F. Robertson, of Kiefer.

Texas. New Sutherland Springs Oil & Gas Co., of Sutherland Springs, increased capital stock from \$12,000 to \$17,000. L. Grimm, Sapulpa, T. E. Farr and C. F. Robertson, of Kiefer, Oklahoma.

Vol. 8, No. 20, March 20, 1910, p. 21. Incorporated. Miscellaneous. The Dunn Gas & Oil Co., Little Rock, Ark., capital \$100,000. Incorporators, B. J. Reaves, H. C. Daniels, E. R. Wilson, I. O. Runyan, M. Dunn, and others.

p. 21. Advertisement. South Bosque Oil Field for sale, 10 miles from Waco, Texas; 11 producing oil wells in operation; room to drill 50 more; pipe line in operation to railroad station. For full particulars, write L. Migel, Waco, Texas.

Vol. 8, No. 21, April 6, 1910, p. 5-6. Bartlesville version of the Priestley deal. The principal topic of interest in Bartlesville for the past two weeks has been the large group of options which have been exercised by George C. Priestley. Inasmuch as this work has been done very quietly, and Mr. Priestley and his associates decline to make any further statement than that the purchasing party is not the Standard Oil Company, it is not possible to give an official list of the properties optioned, but the following have been stated to be included by one or another of the newspapers: The Lumbermans, Wolverine, Fort Pitt, Pickwick, and Galena Companies, controlled by George C. Priestley. The Sagamore Oil Company, Sachem Oil Company, and the Niagara Oil Company, controlled by W. H. Johnson of Bartlesville. Stevens Point Oil Company, Osage Lot 63, Wigwam Oil Company, Osage Lot 170, and Waukesha Oil Company, and Osage Lot 172, all managed by Dr. R. D. Rood of Bartlesville. Foster, Clark & Ross, Osage Lot 164. Oneida Oil Company, Osage Lot 72, managed by T. W. Preston. Shiocton Oil Company, Osage Lot 171, managed by T. W. Preston. Modern Oil Company, managed by A. G. Morton. Marietta Oil Company, managed by H.A. Beasley. Copan Oil & Gas Company, owned by W. A. Smith, J. S. Irwin, and John P. Jackson, of Bartlesville. Carnegie Oil Company, managed by John A. Bell. The Sutton Oil Company, managed by A. S. Sutton. Caney Valley Oil Company, and the Security Oil Company in which Messrs. Bucher and Raydure are interested. The aggregate value of the properties has been variously estimated by the press at \$5,000,000, \$5,100,000, and \$6,000,000. There has been the utmost speculation as to who the parties are back of the deal, and as to whether it means a new pipe line. The properties have been given closer scrutiny than probably any other

large deal in the field. The producers have been prone to believe that the deal means the construction of another line to the Gulf, in which case it is estimated that 20,000 barrels of oil per day will be used.

p. 14. Probable geographical limits of Oklahoma oil and gas fields, by L. L. Hutchison. L. L. Hutchison, assistant director of the Oklahoma Geological Survey, read the following paper:

The world's first deep well drilled with the avowed purpose of procuring a supply of crude petroleum was sunk in 1859 at Titusville, Pa., by Colonel Drake. In a few years other states were producing more or less oil, and by 1884 Kansas was rejoicing over her first gas well.

The Cherokee and Choctaw Nations were attractive by reason of the possibilities of their domain. During the year 1884, the Choctaw Council passed a law entitled "An Act creating the Choctaw Oil and Refining Company, for the purpose of finding petroleum or rock oil, and increasing the revenues of the Choctaw Nation." The Choctaw law legalizing oil prospecting preceded the Cherokee law of like nature only a few weeks. Each charter required active operation to begin within one year. Under the provisions of these acts, two Indian companies were organized, both of which associated themselves with Dr. H.W. Faucett of New York, for development purposes, thus forming a new company. This new company erected a derrick on the Illinois River above Tahlequah, at Alum Bluff, and one about 14 miles west of Atoka on Clear Boggy.

In 1886, Edward Bird secured a lease on a large acreage west of Chelsea, on which there were 11 wells in 1896, when the Curtis Bill reduced it to 12 sections, the present "Big Lease".

In 1893, the Cudahy Company began operations around Bartlesville.

In 1896, the big Osage lease was secured.

In 1901, oil was found near Granite and at Red Fork, and gas had been known near McAlester for years.

The discoveries at Cleveland, Ponca City, and Blackwell enlarged the boundaries of possible oil territory, and gave rise to the question, "What are the probable geographical limits of the Oklahoma oil and gas fields?"

In about the year 1905, I began a study of that question, and the results of that work since have given rise to the conclusions represented by the map which I have prepared. The region represented as being the most probable territory is that which is considered most likely to contain oil and gas in paying quantities. That which is indicated as possible territory is so designated because conditions are such that it seems not impossible for oil and gas to occur in paying pools, but the conditions are not so favorable as in the probable region. It seems that a short review of the method of study leading to these conclusions may not be without interest. A study of the theories of origin was first made, the organic and inorganic theories, and the organic seems more plausible, which teaches that oil and gas are formed from organic remains in rocks. On considering the geology of Oklahoma, the most probable region for oil and gas is the area that contains abundant organic remains. The rocks of the redbeds are red because of the absence of organic matter to prevent the rusting of their iron contents, and therefore impoverished of material from which oil and gas could have been formed. The apparent occurrences within the redbeds at Lawton, Gotebo, Wheeler, and in Clay County, Texas, are doubtless due to transportation of oil and gas upward into the overlying redbeds.

The rocks are so broken, crushed, and crumpled within the confines of the Ouachita and Arbuckle Mountains, that it does not seem possible that any large amounts of the oil and gas, which were once present beyond any doubt at all, have been retained until the present time. Oscillations were frequent within the regions of the Ozark Uplift of northeastern Oklahoma, so that conditions there are unfavorable for the preservation of any oil and gas which may have formed. The rocks of the Wichita Mountains are almost exclusively granite, and pay oil or gas has never been found in granite rocks.

Such seems, in the light of present knowledge, to represent the probable geographical limits of the Oklahoma oil and gas fields.

Vol. 8, No. 22, April 20, 1910, p. 8. Central Fuel Oil Co. incorporated with ten millions authorized capital. Dover, Delaware, April 19. - (Special Telegram). Certificate of incorporation of the Central Fuel Oil Co., which, according to report, will take over a large acreage of oil property in Oklahoma, optioned by George C. Priestley of Bartlesville, was filed today. The authorized capital is \$10,000,000, and the incorporators are Harry R. Isaacs, Aaron Finger, and Charles W. Bush, of Wilmington, Delaware.

p. 8-9. New company plans to lay pipe line. Wilmington, Delaware. With a capital of \$10,000,000 the Central Fuel Oil Co. of Delaware has been incorporated to take over and develop oil lands in Oklahoma and Texas oil fields to the Gulf of Mexico, where the oil will be exported. Charles Whiteley Bush, a Wilmington attorney, who, with Harry R. Isaacs and Aaron Finger, are the Delaware incorporators of the company, said today that he had secured the charter for George C. Priestley, a Bartlesville, Oklahoma, oil man, who is acting for others.

Mr. Bush said he knew nothing of the plans of those back of the proposition, beyond the fact that they intended to develop oil lands in the states mentioned and to lay pipe lines between the fields and tidewater. He had no idea that Standard Oil was back of the new company. Mr. Finger and Mr. Isaacs are law students in Mr. Bush's office. Mr. Bush will be a director and the Delaware agent of the company.

p. 29-30. Incorporated. Oklahoma. Turkeyfoot Oil and Gas Co., of Claremore and Muskogee, capital \$8,000. Directors, W. L. Kistler, J. E. Shaffer and George K. Powell.

Stacome Oil Co., of Okmulgee, capital \$25,000. Directors, H.E.P. Standford, Almond S. Cochran, and Lew C. Morton.

Snyder Oil and Gas Co., Snyder, capital \$10,000. Directors, John G. Willis, J. D. Pridgin, J. J. Wallace, S. D. Bailey, and J. V. McClintic.

Horseshoe Lake Oil Co., Muskogee, capital \$25,000. Directors, H. H. Galbraith, A. W. Culp, and P. B. Macoughtry.

Chicago Oil, Gas and Development Co., Oklahoma City, capital \$1,000,000. Directors, H. D. Riddle and W. A. Phillips, Cleveland, Ohio; C. A. Stotsman, W. H. Stedman, and J. J. Hoteling, Oklahoma City.

Oklahoma Producers Co-operative Oil & Gas Syndicate, Tulsa, capital \$100,000. Archibald Campbell, J. S. McCarthy, and Hastings Malcomb, Tulsa.

Tulsa Heights Oil & Gas Co., Tulsa, capital \$11,000. Incorporators, C. W. Deming, D. C. Acosta, Tulsa, and J. B. Hill, of Memphis.

Nellette Oil and Gas Co., Tulsa, capital stock \$10,000. Directors, C. H. Clouston, St. Louis, Mo.; J. L. Kirkland, Wheeling, West Virginia; E. R. Meighen, Tulsa.

Security Development Co., Oklahoma City, capital \$10,000. Directors, Franklin L. Gast, Edwin Bancroft, Annabelle Gast, Oklahoma City.

Petroleum Publishing Co., Tulsa, capital stock \$5,000. Directors, H. L. Wood, Tulsa; W. D. O'Neill, Independence; P. C. Boyle, Oil City, Pa.

Sand Springs Oil Co., Tulsa, capital stock \$5,000. Directors, R. A. Josey, Charles Page, and I. L. Greer, Tulsa.

Carwood Oil Co., Bartlesville, capital \$12,000. Incorporators, P. H. Woods, St. Louis, Mo.; Edward S. Carter, William M. Carter, Bartlesville, and others.

Interocean Oil Co., Bartlesville, capital \$10,000. Incorporators, J. F. Barlow, H. V. Dorman, and G. C. Adams.

Gid Oil & Gas Co., Claremore, capital \$10,000. Incorporators, James Scott, William G. Payne, John T. Ezzard, and W. L. Kistler.

Comet Oil Co., Nowata, capital \$10,000. Incorporators, A. L. Farmer, A. E. Durah, Tulsa; W. B. Tucker, Coffeyville, Kansas.

The Fields Oil & Gas Co., Henryetta, capital \$50,000. Incorporators, William Brunk, C. E. White, and J. H. Lincoln, of Henryetta.

The Kansas City Oil & Gas Co., Madill, capital \$60,000. Incorporators, S. F. Funk, Okmulgee, R. P. McGeehan, and others.

The Battery Oil & Gas Co., Tulsa, capital \$25,000. Incorporators, C. E.

Strouvelle, D. Vensel, and Charles R. Gilmore.

The Tad Oil Co., Tulsa. Directors, A. H. Reese, T. D. Lyons, Sophia Magnuson.

The Oklahoma Producers' Co-operative Oil and Gas Syndicate, Tulsa, capital \$100,000. Incorporators, Archibald Campbell, John S. McCarthy, and Hastings Malcolm, of Tulsa.

The Smith Canadian Oil and Gas Co., Wannette, capital \$25,000. Incorporators, Wm. Beaty, J. B. Deen, A. T. Barber, B. A. Tomlin, of Wannette.

American Well & Prospecting Co., Bartlesville, capital \$150,000. Incorporators, E. L. Akin, Bartlesville; H. G. Johnston, Corsicana, Texas; Charles Rittersbacher, Los Angeles, California.

Hominy Gas Co., Hominy, capital \$100,000. Incorporators, Charles Walling, president; Pat Harris and Alf Brown, vice-presidents; Charles Peters, secretary; H. M. Mather, treasurer.

Grand Valley Oil & Gas Co., Muskogee, capital \$10,000. Incorporators, Frank H. Burek, Frank Fauls, F. C. Warren, and John F. Champion.

Big Joe Oil & Gas Co., Sapulpa, capital \$10,000. Incorporators, Joseph Bruner, Maggie E. Bruner, of Sapulpa; Arthur B. Rees, Tulsa.

Maldrabo Oil Co., Muskogee, capital \$16,000. Incorporators, E. B. Drake, Thomas Duncan, A. C. Trumbo, and others.

Wilstan Oil Co., Okmulgee, capital \$10,000. Incorporators, W. V. Wilson, O. D. Stanbury, and others.

Southern Oil & Mining Co., Oklahoma City, capital \$30,000. Incorporators, D. C. Richardson, Shreveport, La.; and others.

Texas. Fort Worth Well Machinery Co., Fort Worth, capital \$10,000. Incorporators, Charles E. Bowman, A. H. Herdman, and W. F. Randall.

Wichita Gas Co., Wichita Falls, capital \$30,000. Incorporators, C. E. Minnick, R. E. Orr, B. E. King, E. P. Greenwood.

Iowa Park Oil & Gas Co., Phoenix, Arizona, capital \$100,000. A permit to do business in Texas was granted. Principal Texas office, Iowa Park, Wichita County, Texas.

Cass County Oil Co., Atlanta, capital stock \$200,000. Incorporators, F. M. Greene, L. W. Willis, John C. Hutchinson, and others.

Rusk Oil & Gas Co., Rusk, capital \$5,000. Incorporators, W. B. Neely, J. S. Wightsman, W. T. Cavin, and J. L. Summers.

Certificates of dissolution were filed by the Oil Producers' Marketing Co. of Beaumont and the A. R. Horn Oil Co. of Corsicana.

Vol. 8, No. 23, May 6, 1910, p. 12. Oklahoma. Completions. Several wildcat wells are drilling south of the Canadian River in the southern part of the state, but there is nothing of interest to report in this connection, except that the test at Hugo, in the southeastern part of Oklahoma, for the Scipio Oil and Gas Company, has been abandoned at 1,300 feet, nothing of a favorable character showing.

p. 14. Oklahoma. Miscellaneous Drilling Wells.

34-9N-13E, Black & Fitzgerald (Hannah) 1	drilling
18-7N-8E, Wewoka Realty Co., Wewoka 6	drilling
25-5S-5E, Mal-Millan Oil Co. 12 Arbuckle	drilling
36-5S-5E, Michaels & Co. 1 Babcock	drilling
Ada, Pontotoc Co. Ada Oil & Gas Co. 2	at 1400 feet
Hugo, Choctaw Co. Scipio Oil Co. 1	at 1000 feet
Idabel, McCurtain Co. J. Frey 1	at 1100 feet
Durant, Bryan Co. Bryan Oil & Gas Co. 2	drilling
Poteau. Poteau Oil & Gas Co. 1	drilling
Waurika, Jefferson Co. Sunshine Oil Co. 1 Myers	drilling
Marietta, Carter Co. Love Oil & Gas Co. 2 Wilson	drilling
Comanche. George Reed 1	drilling
?0'Neil Construction Co. 1	drilling

p. 30. Personal Mention. J.H. Caldwell, of Titusville, who went to Oil Creek in 1864 and has followed the oil industry ever since, spent some days at

Tulsa and in the Oklahoma Fields. Although he is 72 years old, and underwent a serious surgical operation in February, Mr. Caldwell is a well preserved man. It was an interesting sight to see him in talking old times with Charles Collins and W. Thompson, formerly of Bradford, Pa., and L. M. Lockwood, all of whom have been following the game since the Drake well started it.

p. 34. Fuel oil stations for Navy. Completion of the first six oil depots for the United States Navy is set for October 1 this year. Bids for their construction will be advertised. In addition to the four depots to be established at Bradford, R. I., Norfolk, Va., Charleston, S.C., and Key West, Fl., one will be constructed at Guantanamo, Cuba, and another at San Juan, Puerto Rico. By October 1 it is expected that all of the fifteen oil-burning torpedo boat destroyers will have been delivered to the government. Each of the six new stations will have two tanks, one for oil and the other for gasoline. The oil tank will be 62 by 30 feet, with a capacity of 2,500 tons or 625,000 gallons. The gasoline tank will be 16 by 32 feet, with a capacity of 250 tons.

p. 34. The Climax Refining Company, of Dallas, has been incorporated at Austin, capital stock \$100,000 with J. A. Ballard, A. W. Clem, and C. B. Cooper as incorporators. The Climax Refining Company has taken over the Climax Oil Company of Waco, the San Jacinto Company of Corsicana, and the Richardson-Gay Refinery and assets at Corsicana, also the Clem-Ballard Oil Company of Dallas. The announced purpose of the new organization is to take up the threads of the absorbed companies, several of which are moribund, and establish a going business, with headquarters at Dallas and the refinery at Corsicana. It is the intention of the new management to establish agencies at Wichita Falls, Waco, Denison, and other North Texas towns.

p. 34-35. Incorporated. Oklahoma. Brady Oil Co., Sapulpa, capital \$10,000. Incorporators, Jos. Bruner, J. L. Brady, and J. C. Ellinghausen. George H. Seager Oil Co., Tulsa, capital \$10,000. Incorporators, C. D. Hill, George Seager, and H. T. Stauffer.

Delia Oil Co., Tulsa, capital \$5,000. Incorporators, Robert Jordan, Fred A. Fulghum, and Mamie Jordan.

United Oil Co., Vinita, capital \$20,000. Incorporators, Charles B. Rogers, Vinita; Isaac Cohn, David Cohn, and D. E. Kneedler, Chelsea, and others.

Silver Lake Oil Company, Bartlesville, capital \$10,000. Directors, Frank Bucher, P. O. Bucher, and H. A. Beasley.

Texas. The Developers' Oil Co., Dallas, filed an amendment decreasing its capital stock from \$400,000 to \$20,000.

Climax Refining Co., Dallas, capital \$100,000. Incorporators, J. A. Ballard, A. W. Clem, and C. B. Cooper.

Fort Worth Oil Co., Salamanca, New York, principal Texas office, Petrolia, Clay Co., Texas, capital stock \$20,000. A permit was granted to do business in Texas.

Miscellaneous. Southern Oil & Gas Co., of Fort Smith, Arkansas, capital \$6,000. Incorporators, M. C. Burke, W. D. Young, W. A. Black, and others.

Garland County Oil & Gas Co., Hot Springs, Arkansas, capital \$50,000. Incorporators, W. G. Morris, Gus Straus, and J. S. Measles.

Siloam Springs Oil & Gas Co., Siloam Springs, Arkansas, capital \$125,000. Incorporators, C. Harrington, L. J. Reese, R. R. Farmer, and R. S. Morris.

Vol. 8, No. 24, May 20, 1910, p. 16. The Hugo test. The latest reliable information from the Scipio Oil and Gas Company's test on the Mary S. Kendrick allotment, Section 5 -6S-17E, near Hugo, on the Frisco Railroad about 15 miles north of the Texas line, is that at 900 feet about 15 feet of sand was drilled through, showing a little gas, a little water, and from 5 to 20 barrels of oil of 37.5 gravity, but the well failing to flow. Some trouble has been experienced in getting the hole properly packed, but the owners, local men of some means, are encouraged and may continue the work. The hole was drilled to the contract depth of 1,500 feet, with

nothing showing below the 900-foot formation, when the hole was filled up to 900 feet, and an attempt made to set a packer.

p. 30. Oil Investors' Journal moves to Oklahoma. Announcement. Eighth year. H. L. Wood President, W. D. O'Neil secretary-treasurer and business manager. Published on the 6th and 20th of each month at 912-912 Texas Ave., Houston, Texas. Subscription \$4.00 a year.

This issue of the Oil Investors' Journal completes the eighth year of its publication. It will also mark the last issue in Texas, for with the commencement of the ninth year, Number 1, Volume 9, the paper will be printed in Tulsa, Oklahoma., the new management, for the betterment of the news service and the extension of its business, having deemed this action advisable as a business convenience. The new editor of the Journal lived in Texas a good many years, and has relatives scattered over the state, and really feels a tinge of regret that the move is necessary, but it will really be of material benefit to the increasing number of patrons of the paper - business, you know. Persons desiring to communicate with either the editorial or business office of the Journal, also exchanges, will confer a favor by mailing them to the Tulsa, Oklahoma, office, Box 1047. It is proper to state that an office will be maintained in Houston, where A. V. Borque, the news representative covering the Gulf Coast oil fields, will make headquarters, and any courtesies extend to him will be appreciated by the management.

The Oil and Gas Journal. The Oil Investors' Journal, Tulsa, Oklahoma, June 16, 1910, Vol. 9, No. 1, p. 22. Published weekly at No. 15, East Third Street, Tulsa, Okla., by The Petroleum Publishing Co., H. L. Wood, President, W. D. O'Neil, Secretary-Treasurer. Subscription, single copy \$.10, One year \$3.00. Charles S. Ellicott, advertising representative.

Publishers' announcement. The Oil Investors' Journal has ceased to exist as a distinctive title, but the publication founded and continued for eight years by Holland S. Reavis with that title, at the beginning of its ninth year, becomes The Oil and Gas Journal. To meet the distributing necessities of an expanded field, the publication office has been established in Tulsa, Oklahoma, the trade metropolis for the second largest producing oil and gas field in the world. The previous periods of issue, twice a month, have been shortened to an issue every week, fifty-two issues a year, and the size of the paper increased for greater convenience in the arrangement of reading matter and advertisements, also as an improvement in appearance. When the present management bought the Oil Investors' Journal, the subscription price was \$4 a year for 24 issues of a page area of 20 inches. After due deliberation, it was thought best to increase the page area to 48 inches, four 12-inch columns to the page.. The subscription price is fixed at \$3 a year.

The Oil and Gas Journal essays to print regularly reliable reports from every state and district in the United States. To do this it is necessary to have a personal representative who knows something of the practical end of the oil business to prepare the report so that producers, pipe line and refinery people will understand at a glance that it is real oil field news. This effort means a large staff of field reporters - something that only one newspaper in the world has ever been attempted and executed - The Oil City Derrick. The Oil and Gas Journal has joined with the Derrick to extend the scope of these field reports, bearing part of the cost, to the end that what might have been otherwise impossible may be obtained, and the thousands of people engaged in the oil and gas industry will be able to secure, at a minimum cost, a fairly complete record and history of the business. The methods of the Associated Press will be followed in getting reliable news, free from local, personal, and class bias. The editorial and business offices are located on the second floor of the Stansbery Building, 15 East Third Street, central Tulsa. The business telephone number is 1930, W. D. O'Neil in charge. The editorial telephone number is 1931, H. L. Wood in charge. A department will be dedicated to chronicling the death of persons connected with the oil industry. Single copies of The Oil and Gas Journal may be obtained at news stands for 10 cents.

Vol. 9, No. 1, p. 1. Latest completions. On the C. L. Taylor land, Petrolia, Clay County, Texas, half a mile east of gas wells, the Producers Oil Company's first test is making 2,500 barrels of oil a day from a 1,750-foot formation, 47 gravity oil. This is an entirely new oil-producing formation in North Texas and is an important strike.

p. 2. Possible Showing. (Mid-Continent Fields). Local people drilling a test at Poteau, on the Kansas City Southern Railroad southwest of Fort Smith, Arkansas, have ordered nitroglycerin to shoot 100 feet of sand at about 1,600 feet. No information is at hand as to whether there was any oil in evidence. A little gas has showed in three tests drilled to the southwest of Poteau, toward McAlester.

p. 2. Wildcat Wells. (Mid-Continent Fields). Local people, drilling at Sallisaw, west of Fort Smith, Arkansas, are down 2,000 feet and prepared to drill 3,000 feet.

On the J. Yahola land, Section 27 - 10N-11E. near Weleetka, the Southern Oil Company is drilling a test, and at Hannah, on the Fort Smith and Western Railroad east of Dustin and south of the North Canadian, Black and Fitzgerald are due with their test, Section 34-9N-13E.

Crosson, Hubbell & Queen are drilling a test on the Thompson land, Section 23-5N-7E, a mile due east of Francis, on the Frisco Railroad 100 miles southwest of Tulsa.

The test drilling at Ada, 10 miles farther southwest from Francis, shot a 1,200-foot sand, where oil showed, but the hole is in trouble.

p. 4. Oklahoma. Summary and Field Report. In all of Oklahoma to the east, south, and west of producing territory, 7 wells were either completed or abandoned as hopeless during May, two wells at Wheeler, in Carter County near the Texas line, producing 30 barrels of fuel oil a day, and one in the southeastern part of the state, at Hugo, making a 10 barrel a day showing, with a light gasser at Madill, just north of the Red River, and 15 test holes are in various stages of drilling, from one at Alva, Woods County, in the extreme northwestern part of the state, 2,900 feet deep, to Idabel in the extreme southeastern part, 1,300 feet deep. At Poteau, near the Arkansas line southeast of Muskgoee, a test is reported to have found 100 feet of sand, and waiting for a shot, in a section where level formations appear. A test at Sallisaw, just west of Fort Smith, is also 1,600 feet deep. An interesting test is drilling a mile east of Francis, 100 miles southwest of Tulsa.

p. 8. (Detailed field report, Oklahoma. (p. 4-10.) Completions.
Miscellaneous.

Waurika. O'Neill Construction Co 1.	dry
Marietta, Carter County. Love Oil & Gas Co. 2 Wilson	dry
16-3S-2W, Santa Fe Railway 39 W. B. Jansen	15 bpd
22-3S-2W, Santa Fe Railway W. B. Jansen	10 bpd
25-5S-5E, Mal-Millan Oil Co. 12 Arbuckle	dry
30-5S-5E, Michaels & Co. 1 Babcock	gas
5-6S-17E, (Hugo), Scipio Oil Co. 1 M. S. Kendrick	10 bpd
Total: 7 wells completed, 40 bopd production, 3 dry holes, 1 gas well.	

p. 10. (Detailed field reports, Oklahoma, p. 4-10). Drilling rigs.
Miscellaneous, 15 wells drilling.

34-9N-13E?, Black and Fitzgerald - (Hanna)	drilling
18-7N-8E, Wewoka Realty Co. - 6 Wewoka	drilling
23-5N-7E, Crossman, Hubbell & Queen 1 Thompson	drilling
Ada, Pontotoc Co., Ada Oil & Gas Co. 2	at 1,400 feet
Alva, Woods County, Alva Deep Well Co. 1	at 2,900 feet
Comanche, George Reed 1	drilling
Durant, Bryan Co., Bryan Oil & Gas Co. 1	drilling

Idabel, McCurtain Co., J. Frey 1 at 1,300 feet
 Kingfisher, on 99th meridian, Local Co. 1 drilling
 Lawton, Lawton Gas Co. 6 drilling
 Poteau, Poteau Oil & Gas Co. 1 drilling
 Sallisaw, Strum & Co. 1 at 1,600 feet
 Waurika, Jefferson Co., Sunshine Oil Co. 1 Myers drilling
 Wheeler, Carter Co., Santa Fe Railway 41 drilling
 Wheeler, Carter Co., Santa Fe Railway 42 drilling

p. 10. Detailed field reports, Northwest Louisiana. The most interesting place just now west of the Mississippi River is the development at Caddo. Northwestern Louisiana and Northeast Texas, which bears all the marks of an important oil field, with 10,000 barrel a day wells showing oil equal to the high-grade Pennsylvania crude. If the field develops an area of any extent, the trade must reckon with it seriously. In May, there were 15 completions in Caddo, 4 gas and 2 dry, the new production was 10,125 barrels, and 18 rigs and 32 drilling wells are reported, an average per well of more than 1,000 barrels per day. This is an increase of about 7,000 barrels per day, and a slight increase in new work. The old part of the field, where oil and gas are found at various depths, is rather quiet, except in the shallow sand east of Vivian, the extreme northeastern part of the field, where two wells showing for 500 barrels per day have added new interest. The new deep sand development, on both sides of the state line, is still something of a problem, as none of the wells have been drilled through the sand, and its staying qualities and the water are still matters for conjecture. The two best wells, 95 feet apart, have acted irregularly, rising and falling alternately from 2,000 to 11,000 barrels a day each. Jeems Bayou and Lake Caddo form a rather arbitrary line, west of which appears the rich and regular formation which furnishes the recent gushers that have disturbed trade conditions, while east of the bayou and south of the lake, the formations are badly broken and very erratic in performance.

Central North Texas. In the Corsicana-Powell District of Central Texas, 11 completions were reported for May, 1 dry and 1 gas. The new production was 39 barrels, and 3 rigs and 8 drilling wells are reported. The John Sealy & Company Refinery is now receiving via tank cars, 2,500 barrels a day of Caddo paraffin crude, and Corsicana crude was reduced from 70 to 60 cents, the Caddo price. Several properties have been transferred in the Corsicana Field, and there may be increased drilling in spite of the market decline which did not affect the heavy oil in the Powell end of the field.

Petrolia, Clay County. Reports have been coming in from Henrietta and Petrolia, Texas, for a week or more, that a well of some kind had been struck in the 1,750-foot sand, the deep gas sand, on the C. T. Taylor land, a mile east of the old development in the shallow sand. S. A. Patterson, who has lived in the Petrolia Field since it was opened, writes the Oil and Gas Journal, date of June 6, that the well flows 100 barrels an hour, and that the oil is 47 degrees Baume. The well was drilled for the deep gas, and after a showing appeared, it was kept pretty quiet. No tankage was up, and the hole was not finished until everything was ready, which probably accounts for what the layman always calls the "mystery". All the oil heretofore produced at Petrolia has come from shallow sands, from 200 to 750 feet deep, and the production is all in a small area. The production reported may be high, but there is a well there that opens a new producing formation for oil, and the heavy gas found about Petrolia evidently comes from oil.

Vol. 9, No. 2, June 23, 1910, p. 22. Personal Mention. G. F. Getty, of Los Angeles, California, was a caller at the Oil and Gas Journal office this week. Mr. Getty, who formerly resided at Minneapolis, Minnesota, organized the Minnehoma Oil Company, operating Lot 60 in the Osage Reservation, when the Oklahoma field first opened, and has been very successful as an oil producer. It is perhaps due Mr. Getty to state that he went to California to enjoy life, and not to become interested in the oil fields there, and he is enjoying life.

Vol. 9, No. 3, June 30, 1910, p. 2. Oklahoma, June Operations, p. 1-2. Wewoka gasser. The Wewoka test reported last week was drilled by the Franklin Oil and Gas Company, half a mile west of the town. At about 1,400 feet, 6,000,000 cubic feet of gas per day was developed, and drilling continued. In the lower sand, about 1,600 feet, where the oil showed in two other wells near by, sufficient salt water came in to drown out the gas. The fact that so good a volume of gas was found is encouraging at least, an another test will be drilled, as the gas showed in the same sand in the other wells. It seems likely that somewhere in Seminole County neighborhood, both oil and gas in paying quantities will be found.

Dustin. The Black & Fitzgerald test at Hanna, on the Fort Smith and Western Railroad east of Dustin, has reached a depth of 2,400 feet, with no indications of oil or gas, and drilling will be continued.

Southern Oklahoma. At Wheeler, Carter County, near Red River, 20 miles northwest of Ardmore, where the Gulf, Colorado, and Santa Fe Railroad is drilling, the last well completed was No. 45, and Nos. 46 and 47 are drilling. The company has been working in that field, all of the wells having been drilled on practically one 160-acre tract, in sections, 17, 19, and 21 -2S-3W, for five years. Enough gas has been developed to supply the town of Ardmore, and a number of oil wells have showed, with a number of dry holes, all in a broken formation at 1,100 to 1,200 feet deep, the oil being an asphalt of 20 degrees gravity. No oil is held in storage, and none has been shipped, but the work goes on just the same.

At Lawton, local people are drilling one test several miles southeast of town, and are shut down part of the time. The Sunshine Oil Company is working on a test four miles and a half west of Waurika, with a fishing job. Just at this time, southern Oklahoma is extremely quiet in oil circles.

Vol. 9, No. 4, July 7, 1910, p. 2. Little Rock gas line. The Arkansas Natural Gas Co. has completed its survey and secured the right-of-way from Caddo to Little Rock, Arkansas, and is now receiving its 16-inch pipe. The work will be rushed as rapidly as possible. The J. C. Trees Oil Company, C. G. Dawes of Chicago, B. G. Dawes of Marietta, Ohio, with a number of associates and other interests, control this company. A big acreage in the Caddo Field is controlled, with a number of strong wells shut in, and the intention is to connect with a number of good towns in Texas, Louisiana, and Arkansas. This company has no connection, at least at this time, with the Busch-Everett people of St. Louis that have a franchise in New Orleans and have talked of laying a line from Caddo to St. Louis. Nothing is being done at present in the way of connecting either city.

Caddo Production. The present production of the Caddo Field is placed at 35,000 barrels per day, with 2,000 barrel a day wells producing 44 gravity oil being exceptional, but after watching a 10,000 and a 20,000 barrel per day well in action, the smaller ones do not cause the feeling of uneasiness that prevailed at first. The Gulf Company is receiving pipe for its Caddo-Lufkin line. The preparations by The Texas Company and The Standard Oil Company of Louisiana are the best evidence of a belief in the future of the Caddo Field, and they are preparing for a bigger production.

p. 4 Oklahoma and Arkansas, drilling and completions in June. (p. 4-8). Miscellaneous Oklahoma. Of the eight wells completed in June, scattered south of the regular producing territory in Oklahoma, three were dry and two showed some gas. Four light producers were completed in the Wheeler District near Ardmore, adding nothing to the commercial production, and nine wildcat tests are drilling in widely separated sections, but the spirit of the restless wildcatters is not keeping pace, at least in southern Oklahoma, with his insurging cousins on the Chautauqua circuit. The latest completion in the wildcat list is a failure at 2,400 feet, just south of the North Canadian River and east of Dustin.

Arkansas. Four strings of tools are running in the Fort Smith gas belt, along the western edge of the state, but as it is very light gas territory, not much is expected of it. The Journal's field survey indicates that some wildcating will be done in the southern half of Arkansas during the summer. Previous efforts in this direction have not been very encouraging, but it is a brave guesser who dares

make a cinch bet about oil.

p. 6. Oklahoma, Miscellaneous completions. 9 wells completed, 3 dry, 2 gas, 25 barrels per day production.

34-9N-13E, Black & Fitzgerald (Hanna) 1	dry
18-7N-8E, Franklin Oil Co. 6 Wewoka	gas
Ada, Pontotoc Co., Ada Oil & Gas Co. 2	dry
Poteau, Poteau Oil & Gas Co. 1	gas
Wheeler, Carter Co., Santa Fe Railway 41	10 bopd
Wheeler, Carter Co., Santa Fe Railway 42	dry
Wheeler, Carter Co., Santa Fe Railway 43	5 bopd
Wheeler, Carter Co., Santa Fe Railway 44	5 bopd
Wheeler, Carter Co., Santa Fe Railway 45	5 bopd

p. 8. Oklahoma, Miscellaneous rigs and drilling wells. 9 wells drilling.

23-5N-7E, Crossman, Hubbell & Queen 1 Thompson	drilling
Alva, Woods County, Alva Deep Well Co. 1	at 2,900 ft.
Idabel, McCurtain Co., J. Frey 1	at 1,300 ft.
Kingfisher, on 99th meridian, Local Co.	drilling
Lawton, Lawton Gas Co. 6	drilling
Sallisaw, Sturm & Co. 1	at 2,400 ft.
Wheeler, Carter Co., Santa Fe Railway 46	drilling
Wheeler, Carter Co., Santa Fe Railway 47	drilling

p. 10. Texas wildcat notes. The Comet Oil company organized May 18 by Theo. I. Monihan and W. M. Stephenson, is starting a test on Big Hill, a mile and a half south of Hull, Liberty County, Texas...Mr. Stephenson also has a block of leases in Greer County, Oklahoma, on which he would like to have a test drilled.

Vol. 9, No. 5, July 14, 1910, p. 2. Gasser at Poteau. After a dose of nitroglycerin, the test at Poteau, on the Kansas City Southern Railroad southwest of Fort Smith, Arkansas, in Oklahoma, developed as an 8,000,000 cfigpd gasser in a formation showing about 100 feet of sand at a depth of 1,600 feet, as near as can be learned. The showing before the shot was close to 2,000,000 cfigpd. No trace of oil appeared, which makes it look like a continuation of the Fort Smith formation. Fort Smith consumes considerable gas, supplied from the local field, and the volume and pressure are not overly strong. Four strings of tools are running in the Sebastian County Field, to keep up the supply, and if a better supply could be found on the Oklahoma side of the line, it would doubtless come in handy for Arkansas consumption, which makes the Poteau Field of some importance.

The report that a big oil well had been struck 40 miles south of Fort Smith, about 10 miles east of the Oklahoma line, dwindled, on investigation, to about a million cubic feet of gas, found somewhere around 900 feet.

In all of southern and western Oklahoma, not to exceed half a dozen prospect holes are drilling, with nothing of special interest attached to their locations or progress.

p. 2. Caddo Field, Pipe line notes. Pipe for The Texas Company's 8-inch line is on the way, and work will be started as soon as it arrives. The line will run from Shreveport to Garrison, connecting with the company's line from there to Port Arthur.

Work on the Arkansas Natural Gas Company's 16-inch line to Little Rock is going right ahead, and the Gulf Pipe Line Company is pushing the construction of its 6-inch line from Caddo to Lufkin.

It is definitely settled that the Busch-Everett people will lay a 20-inch gas line from the Caddo Field to St. Louis. Practically all the bonds have been placed, and work will be started in the course of three or four months.

The Louisiana Company's field lines are about completed and in shape to handle all the production from now on.

p. 20. Recent deaths. Joseph E. Tomlinson. The many friends of Joseph E. Tomlinson were shocked to learn of his death Friday morning, July 8, at one of

the Tulsa hospitals, where an operation was performed for appendicitis, or an ailment of similar nature, which came on suddenly, deceased having been in apparent perfect health several days before the attack. Mr. Tomlinson was born and reared in northern Iowa, and leaves a son and daughter just reaching maturity, his wife having died several years ago. He was interested in land in Texas for several years, and had been a resident of Tulsa several years, interested with Seth Ely, as the Roberts Oil Company, in several producing leases in Oklahoma, besides a number of royalties purchased. Mr. Tomlinson was an orderly and exemplary man, attentive to business, and a genial friend and neighbor who will be greatly missed by those who knew him. The body was taken to Fort Dodge, Iowa, for burial.

Vol. 9, No. 6, July 21, 1910, p. 2. Arkansas test. W. H. Tate and associates, from Indiana, are drilling a test near Little Rock, Arkansas. In the entire state of Arkansas, eight prospect wells are drilling at this time, three of them in the Fort Smith gas belt.

The Booth test at Arthur City, Texas, on the Red River north of Paris, is shut down at 1,700 feet, in rock, and waiting for cable tools.

Stephens & Estep will lease 10 acres of their 80 acres to a reliable oil company, for one-eighth royalty, if the lessee will drill a test well within thirty days. The farm is in Section 7-11N-6E, Pottawatomie County, Oklahoma. M.S. Stephens, Prague, Oklahoma, Box 114, Rural Route No. 3.

p. 23. Gas for Little Rock. Pittsburgh, July 18. All details for the natural gas line from Louisiana to Little Rock, Arkansas, have been worked out, and the preliminary work is well under way. Pittsburgh capital and enterprise are back of the Arkansas Natural Gas Company, and the Pittsburgh mills will furnish the pipe and nearly all of the equipment for the line. Even day laborers to be employed in its construction will be sent from Pittsburgh, many having arrived at Vivian, in Caddo Parish, the point at which the installation will begin. All of the right of way for the proposed line has been secured and surveyed. It is to be 235 miles long, and consists of 10, 12, 16, and 18-inch pipe. Of the total length of pipe to be laid, more than 100 miles will consist of 16 and 18-inch. At Vivian, in Caddo Parish, one of the largest compressor plants in the country will be erected, and at such points along the line where expedient, pumping stations will be placed.

The proposition first commended itself to the J.C. Trees Oil Company, while drilling for oil in Caddo Parish. Enormous gas wells were encountered, and as soon as tested, were shut in. They continued leasing until they acquired more than 100,000 acres of territory, and by the time they had completed 15 wells, the volume of gas shut in was estimated at more than 300,000,000 cfcpd, and this amount will be ready to market as soon as the line has been completed. The estimated capacity of the line is 40,000,000 cfcpd, and franchises for piping gas into all of the towns touched by the trunk line have been secured, including the towns adjacent to which lateral or branch lines will be extended. The Booth & Flinn contracting company, of Pittsburgh, has the contract for laying the line. The National Tube Company, of Pittsburgh, will furnish the greater part of the pipe, and the shipment of the first 40 miles began last week. The work will be directed from this city, and will be in charge of A. B. Daily, formerly general superintendent of the Manufacturers' Light & Heat Company, now with the Arkansas Natural Gas Company, in the same capacity. The pipe mills in and adjacent to Pittsburgh have never in their history had such a rush of business as at this time. The volume of the demand comes from the west and southwest.

Former Mayor W. J. Diehl has presented his resignation to the board of directors of the Manufacturers' Light & Heat company, and on August 1 will leave his position as auditor to take a similar position with the Arkansas Natural Gas Company, in line with the policy of the Arkansas company to gain a commanding position in the oil and gas world of the Southwest. The general offices will be maintained in Pittsburgh.

The Arkansas Natural Gas Co. is incorporated under the laws of the state

of Delaware, with owners from Pittsburgh, Pennsylvania, with J. C. Trees, president; E. P. Whitcomb, vice-president; H. S. Grayson, secretary-treasurer; W. B. Beecher, assistant secretary-treasurer. Directors, William Flinn, Joseph P. Guffey, A. B. Daily, Jr., J. C. Trees, M. L. Benedum, George H. Flinn, E. P. Whitcomb, H. S. Grayson, T. N. Barnsdall; and Harry W. Davis of Wilmington, Delaware.

Vol. 9, No. 7, July 28, 1910, p. 12. An Arkansas test. The Producers Oil Company is drilling a second test five miles from Snow Lake, Desha County, Arkansas. The first test showed some oil in 11 feet of sand at 1,080 feet, but a bad hole necessitated moving the rig. Another test in the same neighborhood showed a trace of oil at 1,680 feet.

p. 18. Priestley deal. All Oklahoma producers that have accepted the Priestley options have been notified to be in New York Monday next to receive the purchase money. As the first negotiations draw to a close in the Priestley consolidation and purchase of producing properties in the Bartlesville District of the Oklahoma oil fields, the concrete facts are gradually coming to the surface.

The plans for this merger were formed a year ago. P. D. McConnell, the well known Oklahoma producer, conceived the plan, and interested several California people connected with the Southern Pacific Railroad Company's fuel oil supply, especially W. S. Porter, a controlling factor in the Associated Oil Company, at least up to the time, last year, that the Southern Pacific became a controlling factor in the Associated. For reasons that were sufficient, Mr. McConnell preferred to remain in the background, and enlisted George C. Priestley and W. H. Johnson, both of Bartlesville, with Mr. Priestley being known in the negotiations. Many changes have been made in the original plans, both as to procedure and the producing properties that are the basis of the merger. One check for \$60,000 has already passed, and the assurance is given that all the money is in the bank to pay for all the properties as fast as the owners elect to accept it.

Through one of Samuel Untermeyer's associates, the true significance was ascertained of an American-British syndicate that Mr. Untermeyer is said to have formed, for the purpose of exploiting oil fields in the southwest. The Untermeyer syndicate has not been organized to wage war on the Standard Oil Company. It is an entirely new company with \$15,000,000 of British capital, and \$5,000,000 of American capital. Its corporate name is to be the Central Fuel Oil Company. The company's properties are located wholly in Oklahoma, and consist of 39,000 acres on long term lease. It is estimated that when developments underway are completed, the property will produce about 20,000 barrels of oil daily. Arrangements are being made for the construction of 350 miles of pipe line toward the Gulf of Mexico, making direct connection with the pipe line system of The Texas Company. The Texas Company is to refine most of the Central Fuel Oil Company's output.

One contract already has been made by the Untermeyer company for a part of the concern's output. The Southern Pacific Railway has contracted for a term of five years to take about 300 barrels of fuel oil a day. It is said that a portion of the output will be shipped to England direct.

The following dispatch from London appeared July 16, and relates to the Central Fuel Oil Company's affairs. "The largest organization that ever attempted to compete with the Standard Oil Company, was formed yesterday in London. It is a combination of American and English capitalists. The Americans are represented by Samuel Untermeyer, who engineered the combine. Twenty million dollars have been subscribed to begin operations, \$5,000,000 of it being put in cash by English capitalists. This was shipped to America yesterday."

p. 24. Oil and gas in eastern and northeastern Louisiana. Members of the United States Geological Survey have recently visited several localities in Louisiana to investigate the reported occurrence of petroleum and natural gas east and northeast of the known productive fields.

Bogalusa, Washington Parish. During the last 5 years natural gas has been noticed in water wells drilled near Bogalusa and more than a year ago gas

bubbles that left iridescent films of oil on the surface of the water were observed in Bogalusa River. Samples of this gas and others mentioned were analyzed by the U. S. Bureau of Mines:

Carbon Dioxide	3.0 percent
Oxygen	trace
Methane	62.2 percent
Nitrogen	34.8 percent

The nitrogen content is so great that it may be produced by decomposition of vegetable matter under water, near the surface of the ground, but the presence of oil indicates that part of the material also came from considerable depth.

Bayou Sara. A post hole dug on the bank of the Mississippi near Bayou Sara emitted a strong odor of oil, and when this hole was deepened below the level of the present Mississippi River silt, the odor became much stronger, and gas, which could be burned, bubbled up continuously. Chemical analysis of material collected here showed it to be crude oil, and the depth from which it comes, together with the occurrence of natural gas, shows that it is a definite seepage of oil similar to that noticed a few miles to the southeast, at Deerford, where, however, a well sunk more than 2,500 feet gave no further indications of oil or gas.

White Castle, Iberville Parish. About 3 miles southwest of the town of White castle, a well drilled for water several years ago to a depth of 187 feet showed considerable natural gas. In fact, the gas blew the tubing out of the ground. A well driven to a depth of 50 feet, alongside the first one, gave a flow of natural gas sufficient for lighting 3 or 4 houses, and a pipe line is now being laid for that purpose. On test, the oil shows no trace of sulphur, and has no odor of petroleum. An analysis of the gas shows an excess of carbon dioxide, but not the usual high percentage of nitrogen, characteristic of gas resulting from the decomposition of vegetable matter buried in the Mississippi silt. An analysis is of gas from the water well near White Castle is as follows:

Carbonic acid	4.2 percent
Oxygen	0.0
Methane	90.7
Nitrogen	5.1

Judge Z. T. Earle, Sr., reports that about 8 years ago, an old water well 30 feet deep, 3 miles southwest of White Castle, showed gas bubbles, which also yielded films of oil. In the last 8 years, three test wells have been drilled in this neighborhood. The first, drilled 294 feet, made a good showing of natural gas; the second, drilled 542 feet, showed gas and traces of oil at 290 feet; the third struck a log at a shallow depth and was abandoned. During 1909, another well was drilled to a depth of more than 2,300 feet. Traces of oil was encountered at 700 feet, but no considerable amount of gas below 300 feet. At 2,300 feet, salt water was struck, and the well was abandoned. During the same year, a well was sunk 1,300 feet at the sugar house in White Castle, but gave no significant indications of either oil or gas. A careful examination of the records of all wells drilled for gas, oil, or water in this region in recent years will be necessary to determine the probability of obtaining a supply of gas sufficient for practical uses.

Grosse Tete, Iberville Parish. Nearly all the water wells drilled near Grosse Tete to a depth of more than 80 feet show natural gas, which in several wells has had sufficient pressure to blow the tubing out of the ground. During the examination made by the Survey, one of these wells, drilled a year ago, was cleaned of its accumulated mud by flushing, and immediately produced gas of sufficient pressure to throw water about 20 feet from the top of the well casing. The analysis of this gas, after deducting air, is as follows:

Carbonic acid	1.4 percent
Methane	68.2
Nitrogen	30.8

The lack of odor of oil and the large percentage of nitrogen, indicate that this is surface gas, but further examination here is desirable.

Monroe, Ouachita Parish. A year ago, a well was drilled at the edge of the city of Monroe, for a water supply. It tapped natural gas at 1,400 feet. At a point slightly below this, the drill went into salt water, yielding a large supply, which still continues and fills a public swimming pool. The strata below the salt water were comparatively dry, containing traces of oil in gumbo at 2,300 feet, at which depth the well was abandoned. A second well is now being drilled at the city water works, in the hope of obtaining sufficient natural gas to replace the coal used for the city's electric lighting, and for the municipal electric car line. Considerable natural gas has already been obtained. A well of large diameter, if sunk at least 3,000 feet, might obtain gas in this locality. The analysis of the sample collected, after deducting air, is as follows:

Carbonic acid 1.4 percent
 Methane 94.2
 Nitrogen 4.4

Tallulah, Madison Parish. Natural gas and traces of oil were found at a depth of about 500 feet, in drilling the city water well at Tallulah, but the quantity was very small. Seepage of gas and traces of gas in many water wells have been reported, also from Lake Providence, about 20 miles north of Tallulah.

Ruston, Lincoln Parish. A well drilled for the city water supply in Ruston showed seepage of oil and a little gas. It is reported that large natural gas seepages occur about 25 miles northeast of Ruston, near Marion, in Union Parish.

The indications of natural gas in the regions visited, have been sufficient to arouse much interest, and to induce the expenditure of considerable money, but further operations should be delayed until the state makes a thorough examination of the geologic structure of the region.

Vol. 9, No. 8, Aug. 4, 1910, p. 2. Oklahoma (p. 1-2). The local company operating at Poteau intends to do more drilling in that vicinity for gas.

The Sallisaw Oil & Gas Company had reached a depth of 2,800 feet at last report in its test half a mile north of the townsite of Sallisaw, intending to go to 3,000 feet.

Two tests are reported drilling at Hugo, in the southeastern part of the state, where a 10 barrel a day showing was obtained several months ago in a 900-foot sand.

The only work in sight in the southern part of the state are the suspended tests at Idabel, county seat of McCurtain County, and at Durant, in Bryan County, near the Texas line.

The Santa Fe Railway Company keeps plugging away at Wheeler, but no production, except gas, has ever been secured or utilized there.

In the entire western and northwestern part of Oklahoma, there is not a well drilling, except the deep test at Alva and one near Kingfisher, no reports having been received from either one for over a month, and they are either shut down or abandoned.

A good deal of land has been leased around Lawton, where a little gas and showings of oil have been found, but there is nothing doing there now.

p. 6. Oklahoma field report in detail. (p. 4-6). Miscellaneous wells drilling. 11 wells drilling.

Section 23-5N-7E,	Crossman, Hubble & Queen No. 1 Thompson . . .	drilling
Alva, Woods County,	Alva Deep Well Co. No. 1	at 2,900 feet
Comanche,	George Reed No. 1	drilling
Durant, Bryan Co.,	Bryan Oil & Gas Co. No. 1	drilling
Idabel, McCurtain Co.,	J. Frye No. 1	at 1,300 feet
Kingfisher	Local Co. on 99th meridian No. 1	drilling
Lawton,	Lawton Gas Co. No. 6	drilling
Sallisaw,	Sturm & Co. No. 1	at 2,800 feet
Waurika, Jefferson Co.	Sunshine Oil Co. No. 1 Myers	drilling
Wheeler, Carter Co.,	Santa Fe Railroad No. 46	drilling
Wheeler, Carter Co.	Santa Fe Railroad No. 47	drilling

Vol. 9, No. 9, Aug. 11, 1910, p. 2. Oklahoma and Arkansas. (p. 1-2).

Miscellaneous. Unknown parties are drilling a test in Arkansas, at Conway, about half way between Fort Smith and Little Rock.

Another test at Hugo, in the southeastern part of Oklahoma, is reported drilling, and this is all that is going on south of Muskogee. Elsewhere outside of the producing districts of the state, there is nothing doing in the wildcat line.

p. 6. Southwestern field notes. A test is starting at Woodlawn, 7 miles north of Marshall, Texas, on the Thomas Gray headright, on the Blaylock Farm.

The Producers Oil Company has abandoned its test 8 miles northwest of Oakwoods, Texas, at a depth of between 1,000 and 1,100 feet, in rock salt. A new hole has been started by this company three-quarters of a mile to the west of the first hole.

Vol. 9, No. 10, Aug. 18, 1910, p. 1-2. Oklahoma Development. The most important transaction of the week is the Priestley deal, involving a large number of producing properties and acreage in the Cherokee and Osage Districts tributary to Bartlesville. This deal was first broached last November by P. D. McConnell, of Tulsa, a well known producer and operator who interested George C. Priestley and W. H. Johnson, both of Bartlesville. The first installment of 25 percent of the optioned properties was paid on Tuesday of this week, in New York City, the second payment of 25 percent will be paid October 14 next, and the last payment of 50 percent to be paid April 14, 1911.

The Central Fuel Oil Co. was incorporated in Delaware several months ago, with W. S. Porter, of California, president, and George C. Priestley, general manager. English capital has been interested, but to what extent is not known. The company intends to buy crude oil from other producers and market it, implying transportation facilities, a pipe line, tankage, tank cars, etc. The Southern Pacific Railroad will take as much production as can be delivered to its nearest important railroad, which is Denison, Texas, or perhaps Dallas. Any previous negotiations with the Texas Company for pipeline and marketing facilities are off, and Central Fuel Oil Company will operate independently of the Prairie Oil and Gas Company, The Texas Company, and the Gulf Pipe Line Company.

The first installment payment amounted to \$1,250,000 in cash, the total purchase price amounting to \$5,100,000. Samuel Untermeyer, the New York attorney, first interested English money, which provided all the first cash payments. The capital of the Central Fuel Oil Company has been increased to \$20,000,000. A prospectus has been sent out inviting the purchase of gold bonds to the amount of \$5,000,000. It has been intimated that Sir Weetman Pearson was interested in the consolidation, but this is only rumor. (In Vol. 9, No. 6, July 21, 1910, p. 18, it is stated that Sir Weetman Pearson, recently made a peer in England, who has large interests in Mexican oil fields, charged that Standard Oil Company has hired detectives to dog his movements in the United States. In a letter from London, he stated that the Standard Oil Company, or its subsidiary, the Waters-Pierce Company, has for some time past shadowed not only him but also his colleagues. This is contained in a brief for the United States, in the pending appeal of the Standard Oil Company.)

The Prairie Oil and Gas Company (a Standard subsidiary) is taking all the oil produced from these affected properties, the oil having been run since July 1 to the credit of the Central Fuel Oil Company. This is the biggest sale yet consummated in Oklahoma. The Central Fuel Oil Company has rented an entire floor in one of the Bartlesville buildings and will soon be doing business there.

The companies optioned so far had 20,000 acres, and 6,000 barrels a day production, with each company fixing its own price. The companies concerned were:

- (1) Stevens Point Oil & Gas Co., the Wigwam Oil Co., the Waukesha Oil Co., and individual holdings in the Osage Reservation, including Lots 63, 165, 170, and 172, operated by H. V. Foster, R. D. Rood, J. E. Meloy, J. H. Brennen, and E. F. Frost.
- (2) Appleton-Osage Oil Co., Lot 69, by P. W. Clark and Associates.

- (3) Crescent Oil Co., part of Lot 67, by Frank Phillips and Associates.
- (4) Sagamore Oil and Gas Co., in Osage Reservation, Lot 66 and part Lot 67, and producing leases in Cherokee Nation around Bartlesville, by W. H. Johnson and Emory Myers and associates.
- (5) Caney Valley Oil & Gas Co., 1,200 acres in Bartlesville District, by W. S. Raydure and the Bucher Brothers and Associates.
- (6) Copan Oil & Gas Co., producing leases near Copan, by Leslie and John Coombs, J. P. Jackson, and Smith & Irwin.
- (7) Lumberman's Oil & Gas Co., Midland Oil & Gas Co., Carnegie Oil & Gas Co., Pickwick Oil & Gas Co., and affiliated organizations, by G. C. Priestley, H. M. Preston, and J. A. Bell, with large acreage developed in Cherokee Nation.
- (8) Wichita Oil Co., 1,500 acres near Copan, by Riley Allen, James McCormick, and Associates.
- (9) P. D. McConnell and Associates, with a number of companies and approximately 7,000 acres, comprising 19 distinct organizations in the consolidation.

p. 2. A Lawton showing. Some interest attaches to the showing made in a well just finished at Lawton, in southwestern Oklahoma. At 800 feet, a good sand was drilled, that, according to the contractor, makes 50 barrels a day show, the oil testing 42 degrees gravity. A little gas has showed in several wells previously drilled near Lawton. A number of operators have visited the well, but estimates vary as low as 10 barrels a day. A great deal of land has been leased in that vicinity, in blocks of 5,000 to 10,000 acres, and some prospect work may follow.

p. 2. Demand for land near Rodessa. The Bridgeport Oil Company of Indiana, Trees Oil Company, Sun Company, and Gulf Refining Company, have taken a lot of leases in the northern part of Caddo Parish, between the Standard Oil Company's holdings and the Arkansas state line. They are optioned leases for 5-year periods, and are bringing \$2 per acre for yearly rental. It is understood that there will be some development in this territory in the near future. The Standard's test has been rigged up, and work will begin immediately. Brown Bros. are contractors for this well.

p. 24. Steel Drilling Machines. An innovation in the construction of derricks and drilling rigs. The scarcity of lumber is bringing the steel derrick into view. Its added cost is overcome by the saving in lesser liability to destruction by fire, resistance to wind, ease of erection, and stability. It is now possible to buy an outfit built entirely of steel. The sleeve-clamp pipe derrick can probably be built cheaper than other designs, its first cost, for the derrick alone, being about \$400. In addition to this cost, it is necessary to use lumber to the value of probably \$350 to complete the drilling rig. The question of time consumed in removing from one location to another is important, but it is not more than a day's work to take down and re-erect a pipe derrick. Four men, with ratchet socket wrenches, do the work, and their only requirement appears to be an ability to climb to a height of 80 feet. The average weight of the steel pipe derrick is less than 8,000 pounds. The Carnegie Steel Company is now making a type of drilling machine in which the entire structure is furnished absolutely of steel, with the exception of the sills for the engine, and wood floor, and wooden filling pieces for the attachment of the corrugated iron. The weight of such a complete drilling machine is estimated at 56,000 pounds and can drill any ordinary deep hole, and the price is \$1,650, much exceeding the initial cost of wooden or pipe derricks. The construction of portable machines is running largely to the use of steel. For durability and availability, the use of steel will soon be far beyond what it is at present.

Vol. 9, No. 11, Aug. 25, 1910, p. 6. Central Fuel Oil Company. The production of the 26 constituent companies around Bartlesville is about 18,000 barrels a day. There are about 3,000 stockholders, and the company is entirely independent. Two contracts were made one with the Southern Pacific Railroad, calling for delivery

of 2,600,000 barrels of fuel oil per year for 3 years for use in locomotives between El Paso and New Orleans, and Denison, Texas and the Gulf Coast. The other contract is with The Texas Company, calling for delivery of one-half of Central's total production for 10 years. The price per barrel has not been given out, but 65 cents per barrel has been mentioned. Approximately 29,000 acres are included in the transfer, with about 500 producing wells, each well averaging about 14 barrels per day. The Southern Pacific contract calls for 7,000 barrels a day, which is all that the properties are producing now. The Texas Company contract calls for 3,500 barrels a day, so the estimate of 18,000 barrels a day is probably incorrect, unless they are counting undeveloped leases and possibly shut in wells, for future use. The Texas Company is just completing a 3,000 barrel fuel oil refinery at Tulsa, and has a 7,000 barrel a day plant at Dallas, and the two plants can handle the Central production. The Illinois Central Railroad has been figuring with The Texas Company. A tract of land has been purchased in St. Louis, Mo., for station purposes for The Texas Company, and commodious offices have been leased there. The company intends to make St. Louis the base of fuel oil distribution, including the Illinois Central, and that a pipe line from the Oklahoma fields is contemplated.

p. 6. Unique Corporation. One of the most unique and largest corporations in the United States is the Standard Steel Car Company of Pittsburgh, with about \$30,000,000 in sales a year. The company was started about 8 years ago, by "Diamond Jim" Brady, with financial backing from the Mellons of Pittsburgh who own practically the entire capital stock of \$4,000,000, with \$22,000,000 assets.

p. 18. Publisher's announcement. St. Louis has been selected for printing The Oil and Gas Journal, and the next issue, September 1, 1910, will be printed and mailed from St. Louis, Mo. A suite of offices on the 8th floor of the Mercantile Trust Building, 715 Locust Street, Rooms 800-813, will be the offices for distribution. Printing will be done by the Woodward-Tiernan Printing Co. Mr. Wood, the editor, will reside in Tulsa, and Mr. O'Neill, the business manager, will live in St. Louis, Mo., with address Drawer 22.

p. 18. Era of Organizations. Co-operation has been tried in almost every important industry, and the result is always the same. After years of struggle, the successful organization becomes the property of the few who have had sufficient capital and energy to stay with it, and gradually take over the interests of the smaller and dissatisfied members. The Standard Oil Co., Pure Oil Co., Union Oil Co., and Associated Oil Co., began as co-operative organizations. The same is noted in railroads, mining, factories, and every commercial and industrial line.

Vol. 9, No. 12, Sept. 1, 1910, (printed in St. Louis, Mo.), p. 4. Personal mention, George C. Priestley is now in Bartlesville, shaping up the active business of the Central Fuel Oil Co., of which he is vice-president and general manager, and will devote all his time to the affairs of the new company from now on.

p. 8. Mid-Continent Fields (p. 8-12). Oklahoma Field Notes. At Lawton, a test is 1,000 feet deep, and another one is starting.

p. 10. Oklahoma completions. Miscellaneous. 2 wells completed.
Sallisaw, Sallisaw Oil & Gas Co. No. 1 dry
Lawton, Lawton Gas Co. No. 6 15 bopd

p. 12. Oklahoma rigs and drilling wells. Miscellaneous. 9 wells drilling.
Sec. 23-5N-7E, Crossman, Hubble & Green No. 1 Thompson drilling
Alva, Woods County, Alva Deep Well Co. No. 1 at 2,900 feet
Hugo, Local Co. No. 1 drilling
Idabel, McCurtain Co. J. Frye, No. 1 drilling
Kingfisher, Local Co. No. 1 on 99th meridian . . . drilling
Lawton, Lawton Gas Co. No. 7 drilling

Waurika, Jefferson Co.	Sunshine Oil Co. No. 1 Myers	drilling
Wheeler, Carter Co.	Santa Fe Railroad Co. No. 48	drilling
Wheeler, Carter Co.	Santa Fe Railroad Co. No. 49	drilling

p. 12. Big gusher at Caddo, Louisiana. On Saturday, August 27, 1910, in the Caddo Field, the Trees Oil Company completed its No. 20 Stiles at 10,000 barrels a day, in the SE corner of NE 1/4 of NE 1/4 of Sec. 32-21-16.

Vol. 9, No. 13, Sept. 8, 1910, p. 4. Recent incorporation. The Taloka Oil Company has been incorporated at Stigler, Oklahoma, with \$10,000 capital stock, by George C. Henry, of Stigler; E. R. Hubbard and Ezra Brainerd, Muskogee, Oklahoma.

At Mena, Arkansas, the Arkansas, Louisiana and Texas Oil and Gas Company incorporated with \$100,000 capital stock, by R. P. Harris, president; Eugene Cox, E. B. Cox, and J. M. Ward.

p. 6. Gas for locomotives. Though the Texas, Arkansas, and Louisiana Railroad is only 7 miles in length and does not figure on Wall Street, it is the pioneer in the use of natural gas as a fuel for locomotives. The one engine of the system used between Bloomburg, Louisiana and Atlanta, Texas, near the Caddo oil and gas fields and on the Texarkana gas pipe line, after burning coal and oil, is now using natural gas to get up steam, and it is claimed that the last is the best of them all. There are neither cinders, smoke, nor smell incident to its combustion, and steam keeps up with a regularity that would be the delight of any engineer. Moreover, a saving of 25 percent is affected by the use of gas. To the regular tender, now useless except as a carrier of water, a standard gas tank is attached. No pressure is used to fill it, and after the round trip of 14 miles, there is still some carbon left. The credit of the innovation belongs to J. S. Connelly, of Carthage, Missouri, connected with the local natural gas distribution system of the Kansas Natural Gas Company. Whether natural gas can be used to advantage by locomotives making long runs has not been determined as yet.

p. 10. Oklahoma development. (p. 8-10). Wildcatting is nearly a lost art just now in Oklahoma, the nearest imitation being a farmer living near Fillmore (Johnston County, 11 miles NE of Tishomingo). In digging a water well, he found oil at 30 feet, and immediately notified Tulsa to send an expert at once.

p. 14. West Texas Notes. J. A. Hargus, a Journal subscriber, writes from Marathon, Texas, that the Marathon Oil and Developing Company's test well, at 983 feet, found oil under a 60-foot cap rock. Gas appeared when the oil was struck, and every bailer brought up plenty of it, although there was 840 feet of water standing in the hole. In trying to shut off the water, the tools were hung. The Marathon Oil and Developing Company is officered by D. C. Bourland, president; J. H. Henderson, vice-president; J. A. Hargus, treasurer; and M. Straw, secretary. The directors are: Capt. R. B. Woods, Tom Burnham, M. Straw, J. A. Hargus, J. H. Henderson, D. C. Bourland, and A. L. Davis. Marathon is a station on the Southern Pacific Railroad, southeast of El Paso.

Vol. 9, no. 14, Sept. 15, 1910, p. 8. Natural gas rates. Ever since the Oklahoma Natural Gas Company laid its line from Tulsa to Oklahoma City and other southwestern towns, there has been constant kicking over the rates, the service, and pretty nearly everything else connected with natural gas. The average user feels that \$5.00 a month in winter should be the maximum charge. The minimum charge of \$1.00 a month is also a great hardship to the apprentice consumer. The Shreveport, Louisiana, Chamber of Commerce, sent its secretary to Oklahoma, to learn the rates for domestic and factory natural gas in Oklahoma, which is as follows: (per 1,000 cf)

Tulsa. Factory rate, 3 to 7 cents, cumulative; domestic rate, 20 cents; length of pipe line, 5 miles; kind of factories, small glass factories, brick, and oil well supplies.

Oklahoma City. No gas used to speak of; domestic rate, 25 cents; length of

pipe line, 120 miles

Guthrie. No gas used to speak of; domestic rate, 25 cents; length of pipe line, 105 miles.

Shawnee. No gas used to speak of; domestic rate, 25 cents.

Sapulpa. Factory rate, 3 to 10 cents, cumulative; domestic rate, 20 cents; length of pipe line, 6 to 10 miles.

Bartlesville. Factory rate, 3 to 10 cents, cumulative; domestic rate, 20 cents; length of pipeline, 8 miles. Kind of factories, brick, zinc smelters, and cement.

p. 8. Merger of companies. The Cities Service Company incorporated recently, in Dover, Delaware, with \$50,000,000 capital, and is a holding company, into which the Denver Gas and Electric Company, the Empire District Electric Company, and the Spokane Gas and Fuel Company will be merged. The new concern has an authorized capital of \$30,000,000 of 6 percent cumulative preferred stock, and \$20,000,000 common stock. The common stock has all been authorized, and upon the basis of all of the stock of the three companies named above being exchanged under the terms of this offer, the amount outstanding will be approximately \$5,000,000. Of the remainder, \$500,000 has been set aside to be used for such corporate purposes as the directors may see fit, and the remaining \$14,500,000 will be retained under proper restrictions for the future use of the company.

p. 8. Novel gas consumption. Natural gas is being used to fire boilers of cotton gins in Oklahoma. Oklahoma Natural Gas Company has 22 cotton gins connected and Haskell Gas company has 4 connected, the first gins having made connections last year. The rate was 10 cents a thousand cubic feet last year, and 15 cents this year. It requires 3,000 cubic feet to turn out a 500-pound bale of cotton, or 45 cents per bale as an average.

p. 11. Oklahoma developments. (p. 10-11). The Stratford Oil Company is starting another hole at Ravia, Johnston County, Oklahoma. Two holes have been drilled, one being lost at 750 feet, and the other at 500 feet.

Vol. 9, No. 15, Sept. 22, 1910, p. 8. Oklahoma. Two wildcats. Near Hastings, in Jefferson County, a local company drilling for oil struck a fair volume of gas. No details as to depth or character are at hand. There is a trend southwestward from Wheeler, Oklahoma, to Henrietta, Texas, through this area. Considerable land has been leased. Oil and gas have been found in a number of places in southern Oklahoma, at Madill, Lawton, Walters, and Wheeler, and across the river in Texas, but the producing areas are very limited. The red beds underlie the entire southwestern part of the state.

At Poteau, LeFlore County, a 10,000,000 cfm gas well, with 900 pounds pressure, was drilled some months ago and shut in. The New York Fiscal Agency, owner of considerable land in that vicinity, is interested in the gas development, and is arranging to drill another well at once, and two more later, the exact location not yet having been made. The Poteau gas well is much stronger than any of the 70 or more drilled near Fort Smith on the Arkansas side of the line. The gas was found at about 1,800 feet, and it is not improbable that oil will be found somewhere in that neighborhood, with formations and conditions apparently being favorable.

p. 20. New corporations. The Blackwell Oil and Gas Company, of Blackwell, Oklahoma, increased its capital stock to \$300,000. The directors are Edward S. Peckham, Z. A. Harris, J. W. Beatty, W. N. Vickery, N. D. Ristler, and A. G. Barrett, all of Blackwell.

Papers of voluntary dissolution of the Chelco Oil Company were filed at Guthrie, Oklahoma. All creditors have been paid, satisfactory to the stock holders. The directors were, D. S. Waskey, F. W. Stout, and D. L. Pashall.

The Louisiana Petroleum Company, limited, of Shreveport, Louisiana, filed articles of incorporation, capital stock \$750,000; its field of operation to be

in the Caddo Field. G. E. Mengel, of Shreveport, president; W. D. Davis, of Fort Worth, Texas, and W. F. Kirby, of Little Rock, Arkansas, vice-presidents; J. C. Ayers, Little Rock, Arkansas, secretary; T. G. Easterling, Monroe, Louisiana, treasurer.

Vol. 9, No. 16, Sept. 29, 1910. Gotebo gas rate. The Corporation Commission of Oklahoma has ordered that after October 1, the Gotebo Gas Company shall charge 50 cents a 1,000 cubic feet for all gas used up to 5,000 feet a day, and 30 cents a thousand from 5,000 to 20,000 cubic feet, abolishing the \$1.00 minimum charge, and allowing a 5 percent discount when bills are paid by the 10th of each month. The old rate was \$1.00 minimum charge, 75 cents for 1,000 to 5,000 feet, and 50 cents up to 20,000 feet. Gotebo has a little gas from the local field, a sort of neighborhood affair, and as the local people who handle the gas get the worst of it, there may be a dispute over the right of the Corporation Commission to interfere with the action of city councils.

Vol. 9, No. 17, Oct. 6, 1910, p. 12. Oklahoma Development. (p. 8-12).
Miscellaneous wells drilling. 7 wells drilling.

Section 23-5N-7E,	Crossman, Hubble & Green No. 1 Thompson . . . drilling
Alva, Woods County	Alva Deep Well Co. 1 at 1900 ft.
Hugo,	Local Co. No. 2 drilling
Idabel, McCurtain Co.	J. Frye No. 1 drilling
Kingfisher,	Local Co. No. 1 on 99th meridian drilling
Porum,	Sulphur Creek Oil & Gas Co., No. 1 drilling
Waurika, Jefferson Co.	Sunshine Oil Co. No. 1 Myers drilling

Vol. 9, No. 18, Oct. 13, 1910, p. 6. Personal mention. Col. P. C. Boyle, editor and owner of the Oil City Derrick, Oil City, Pennsylvania, spent several days in St. Louis this week. Colonel Boyle is one of the three owners of The Oil and Gas Journal, and his visit will undoubtedly result in some improvements in the publication in the near future. The best part of his life has been spent in studying the needs of oil people, and in improving oil field publications.

p. 16, 18. Arkansas gas rumors. Blowout Mountain excites natives. Little Rock, Oct. 11, 1910. There is considerable interest in the "Blowout Mountain" neighborhood, at the intersection of Scott, Yell, and Montgomery Counties, Arkansas, 45 miles west of Little Rock. Years ago an explosion occurred, some distance up the side of the mountain, which left a big hole. Trees and rocks were hurled over the cliff, hundreds of feet to the valley below, and at intervals since, gas blows out in considerable quantities. The United States Geological Survey has detailed several of its staff to investigate the phenomena, with rumors that they have pronounced it a real gas field.

Two well-known leasers have taken up considerable acreage, and claim to be negotiating with the Busch-Everett people (St. Louis, Mo.) and the Arkansas Nat. Gas Company people. It is reported that the Busch-Everett people have a number of leasers there, securing a block of leases, and it is said that the Arkansas Nat. Gas Company is also leasing. One gas line is already being constructed through that part of the state, and surveys and right-of-way for another line, that of the Busch-Everett people, from Caddo, Louisiana to St. Louis, Mo. It is reported from Shreveport that the 20-inch pipe for the St. Louis line now being financed by the Busch-Everett syndicate, has been purchased, but this cannot be confirmed.

It will undoubtedly pay to keep posted about the gas development and preliminary moves in central Arkansas, as a few test wells are always drilling in the southern half of the state. The latest one was 15 miles southwest of Pine Bluff, where a depth of 1,400 feet was reached, with a small gas showing, when the hole was abandoned. It is the belief of many people that the oil and gas formations at Caddo continues north into Arkansas, and many leases are being taken in the southern tier of counties, north and northeast of Caddo. A possible trend may be toward Fort Smith, Arkansas.

p. 24. National Oil and Gas Company. Incorporated September 7, under the laws of Arkansas, for \$50,000, with 10,000 shares of stock of a par value of \$5 each. Owns 60 acres of land in fee, and holds leases on 1,080 acres. Four thousand shares will be reserved for working purposes in the event of oil being found. Four thousand shares will be sold for development purposes. Land located in Miller County, Arkansas, near Fouke, and along the pipe lines to Little Rock and Pine Bluff, Arkansas. Incorporators, H. F. Offenhsuser, V. E. Buron, Frank S. Quinn, F. A. Symonds, F. E. Purifoy. Officers, H. F. Offenhauser, president; V. E. Buron, vice-president, F. A. Symonds, secretary-treasurer. Attorney, Frank S. Quinn. Executive Committee, F. H. Offenhauser, F. A. Symonds, F. E. Purifoy.

The company expects to start drilling in 5 or 6 months. Holdings are just a few miles north of the Caddo Field. No officer, agent, or employee shall receive compensation for services rendered this company until oil is found, and no officer, agent, or employee shall have any claim against the company for services rendered prior to a well being drilled.

The Texarkana Trust Company is registrar and transfer agent. All money received from the sale of stock shall be paid to the Texarkana Trust Company, who shall hold in trust for the investor 75 percent of such money, and, in the event of no well being started within 3 years, then the investor may obtain his 75 percent by presenting his certificate of stock to said trust company. All money and securities of this company shall be deposited with the Texarkana Trust Company, and shall be withdrawn only by order of the secretary, countersigned by the president. Indications here are about the same as in the Caddo Field. - F. E. Purifoy.

Vol. 9, No. 19, Oct. 20, 1910, p. 4. Personal mention. L. L. Hutchison, of Norman, Oklahoma assistant director of the Oklahoma Geological Survey, has severed his connection with that institution and intends to devote his time to practical application of the geological sciences to the Mid-Continent coal, oil, gas, and asphalt industries, and the location of mining possibilities in the western and middle states. At this time, Mr. Hutchison has a special report in press dealing with oil, gas, and asphalt in Oklahoma, probably the most complete report ever attempted. (Okla. Geol. Survey Bull. 2, published 1911).

J. C. Trees, M. Benedum, and H. S. Grayson, the Trees Oil Company, operating in the Caddo Fields of northwestern Louisiana, and organizers of the Arkansas Natural Gas company now laying a line from Caddo to Little Rock, Arkansas, were in St. Louis, Missouri, both going and coming from Pittsburgh, Pennsylvania. They made a complete inspection of their properties and interests around Caddo, where they have many thousands of acres of oil and gas lands, with a big production of high grade oil and a number of strong gas wells, with a number of wells drilling. They secured most of their acreage before the field had been developed to any extent, and now have one of the valuable holdings of the United States.

Vol. 9, No. 20, Oct. 27, 1910, p. 4. Personal mention. George C. Priestley, vice-president and general manager of the Central Fuel Oil Company, of Bartlesville, Oklahoma, is about to move his residence from Bartlesville to Kansas City, Mo. Seven years ago, Mr. Priestley left Warren, Pennsylvania, to operate in the Oklahoma oil fields, and since that time has developed into a strong executive and organizer, and made a success by constant and energetic work, for which he is entitled to much credit. The organization of the Central Fuel Oil Company, a \$15,000,000 corporation, in which English, New York, and California capital is interested, is largely the result of Mr. Priestley's energy during a year of discouraging labor, but it now seems to be assured, with 20,000 acres and a daily production of 7,000 barrels, contracted for 3 years to the Southern Pacific Railroad and The Texas Company.

Holland S. Reavis, the founder of The Oil Investor's Journal, now the Oil and Gas Journal, was in St. Louis several days this week visiting relatives. "Holly" may be reached at Houston, Texas, where he receives most of his mail and a few friends.

p. 3-4. Trade Notes. The St. Louis and San Francisco Railroad is equipping its locomotives on the Oklahoma City and Sapulpa division, in Oklahoma, with oil burners, with tanks and loading facilities having been under construction for some weeks and now practically completed. Many of the engines used from Monett, Mo., on the Kansas and Oklahoma divisions, to Kansas City, Mo., and Wichita, Kans. on the north and west, and from Sapulpa south to Sherman, Texas, are now using oil, and all of them are being equipped with burners, freight, passenger, and switch engines. The Atchison, Topeka, and Santa Fe Railroad is also beginning the use of oil in its Kansas locomotives. The uncertainty of supply of coal and the increasing cost of coal are bringing many railroads that control coal mines to the use of oil. A great many industrial plants, within reach of crude and treated oil, are equipping for fuel oil, as it is cheaper and more satisfactory in every way than coal, and future supply will warrant its general adoption for steam-producing purposes.

The manufacturers of a diesel engine say that it operates successfully on crude oil, fuel oil, kerosene, or distillate, without any special preparation. When petroleum and its common products can be economically consumed in the cylinders of engines, it ought to be within the means and ability of oil producers and refiners to increase the use of their products.

p. 6. Oklahoma development. At Sulphur, northeast of Ardmore, in the southern part of Oklahoma, a 900-foot hole drilled several months ago, showed some gas coming through 800 feet of mineral water, and local people are going to drill it deeper, in hope of getting gas for the town, which is a sulphur resort and a government reservation.

p. 6, 8. Field Notes. Commissioner to the Five Civilized Tribes in Oklahoma is working on plans to sell 2,000,000 acres of land, the excess above allotments. In the Creek Nation there is 63,000 acres; in the Cherokee, 30,000 acres; in the Seminole, 4,000 acres; in the Chickasaw Nation, 879,000 acres; and in the Choctaw Nation, 818,000 acres. The price will be double the original appraised value, or from \$6.50 to \$13.00 an acre, one-fourth cash, and the balance in equal one-fourth payments.

p. 8. A Texas franchise. The city council of Ennis, Texas, has granted a franchise to the North Texas Gas Company to pipe the town and furnish natural gas within twelve months, contingent on securing a similar franchise at Waxahachie in the same county, the maximum rate to be 50 cents. It is the intention to secure the gas from the Lone Star Gas Company's line from Petrolia, Clay County, to Fort Worth and Dallas.

p. 8. Caddo Field. The Indian Refining Company of Marshall and Georgetown, recently contracted to buy 500,000 barrels of crude from the Trees Company for immediate delivery, with privilege of renewal, at 65 cents a barrel, the Indian Company to lay a pipe line to Shreveport for loading racks.

Gas companies to merge. H. W. Grayson, of the Trees Oil Company and the Arkansas Natural Gas Company, J. C. Donnell representing the Standard Oil Company, and Louis Dennig representing the Busch-Everett syndicate, have been going over the properties and situation in the Caddo Field, preparatory to merging the gas interests. It is not very definite about the Standard being in the merger, except as it would be interested in the gas holdings acquired with the Trees Oil Company, if it buys those properties. It is certain that the Busch-Everett and the Arkansas Gas Company will consolidate all gas interests as soon as the representatives return to St. Louis. This action has been expected for some time, and is one of the reasons for the delays in some of the construction work. This course will make it considerably easier for the Busch-Everett interests to get natural gas into St. Louis, by offering a much better proposition for financing and operating the consolidated properties and the prospective business.

The total oil production of the field on this date is 23,000 barrels a day. One week ago it was estimated to be 44,000 barrels a day. Two days later it

was estimated at 20,000 barrels, the next day at 27,000, and now 23,000. The theory has been advanced by a well-known oil man that a series of pools make up the Caddo Field, each one independent of the other. No other field in the history of the oil business has showed the vagaries that Caddo has, either a well is tremendously large or pitifully small.

Vol. 9, No. 21, Nov. 3, 1910, p. 6. Personal mention. W. G. Park, of Beaumont, Texas, departed last evening for Waurika, Oklahoma, where he is engaged in the effort to bring in a gas and oil field in duplication of that at Henrietta, Texas, where The Texas Company has developed a supply of natural gas for Fort Worth and Dallas. Mr. Park hopes to find the gas to supply the towns of Oklahoma, including Oklahoma City. For a long time, the work has been in progress across the Red River from Henrietta.

Vol. 9, No. 22, Nov. 10, 1910, p. 6. Personal mention. J. M. Schrimsher, of Ryan, Jefferson County, Oklahoma, was in Tulsa during the week for the purpose of buying supplies to drill a well at Ryan, where he has a block of 10,000 acres leased, as the Ryan Oil, Coal and Development Company, with C. W. Miller, president, J. M. Schrimsher, vice-president and general manager, S. H. Snodgrass, treasurer, and A. A. Spring, auditor, with capital stock \$100,000. Mr. Schrimsher was born in Pennsylvania, and started drilling and prospecting after graduating in geology 22 years ago, and has worked in mines and on oil, gas, and water wells from Alaska to Mexico. The first test for his company, at Ryan, 2 miles north of the Red River, is down 500 feet, having passed through an oil sand at 460 feet, with a trace of oil, and finding two veins of salt water, one at 120 feet and one at 175 feet. Ryan is 12 miles due east of the Petrolia oil and gas wells, and 45 miles southwest of the Wheeler oil and gas wells.

p. 8. Oklahoma development. Two rigs are up at Stigler, 45 miles east of Muskogee, for the Stigler Oil and Gas Company, in virgin territory, the nearest production being at Muskogee and the light gas well at Poteau.

The Preston & Co. test just west of Indianola, north of McAlester and south of the Canadian River, is drilling, the only prospect well now drilling in the Choctaw Nation.

At Ryan, 2 miles north of Red River and 12 miles east of the Petrolia Field, the Ryan Oil, Coal and Development Company is down 500 feet in its first test, with three others planned. To the north, also in Jefferson county, the Sunshine Oil Company is down 1,500 feet in its test 4-1/2 miles west of Waurika. Formations are rather bad in that part of Oklahoma, and drilling is rather slow work, but the country has appealed to operators.

p. 10. Sale of Trees property. Standard buys production and acreage in Louisiana. Press dispatches announce the sale of the J. C. Trees Oil Company holdings at Caddo, Louisiana, to the Standard Oil Company, for \$9,000,000. George J. Wolf is mentioned as the agent of the Trees Company, and J. C. Donnell of Findlay, Ohio, represented the Standard. The leased and fee land included in the deal amounts to 104,000 acres, and there is about 8,000 barrels a day production.

Joseph C. Trees, Michael L. Benedum, Harry S. Grayson, and H. S. and C. E. Glenn, all of Pittsburgh, Pennsylvania, are the Trees Oil Company. The Trees Oil Company had completed 25 deep sand wells, with production between 8,000 and 12,000 barrels a day, and with 15 more wells drilling. The Trees Oil Company began operations in Louisiana in August 1908.

p. 10. Oklahoma development. Two rigs are up at Stigler, with a test drilling west of Crowder, and two tests are under way at Waurika and Ryan, Jefferson County, with some at Wheeler, there being only 11 wells reported drilling in Oklahoma outside of the regular producing districts.

p. 14. Oklahoma. Completion and drilling reports in detail. (p. 10-14).

Miscellaneous. 8 wells drilling.

Section 23-5N-7E,	Crossman, Hubbell & Queen No. 1 Thompson . . .	drlg.
Alva, Woods County,	Alva Deep Well Co. No. 1	at 3,000 ft.
Idabel, McCurtain Co.,	J. Frye No. 1	drlg.
Porum,	Sulphur Creek Oil & Gas Co. No. 1	drlg.
Waurika, Jefferson Co.,	Sunshine Co. No. 1	drlg.
Wheeler, Carter Co.,	Santa Fe Railroad Co. No. 50	drlg.
Wheeler, Carter Co.,	Santa Fe Railroad Co. No. 51	drlg.
Wheeler, Carter Co.,	Santa Fe Railroad Co. No. 52	drlg.

Vol. 9, No. 23, Nov. 17, 1910, p. 8. Trade notes. The Texas Glass Company's plant at Texarkana, Arkansas, began operations last week, when the 12 furnaces for heating and melting sand into liquid form for blowing purposes were lighted for the first time. The supply of glass sand for the factory is obtained from the fields near Atlanta, Texas. The plant uses Caddo natural gas.

p. 10. Personal mention. D. W. Franchot, who has just returned from a visit to Poteau, LeFlore county, along the eastern line of Oklahoma, reports that Thomas Wall, president of the First National Bank there, is laying a 4-inch line from the gas well in Section 27-7N-26E, about a mile and a half from town, to be utilized by the Poteau Light and Heat Company. This well tested 2,100,000 cfpgpd after blowing 55 days, with 375 pounds rock pressure. The sand was encountered at 1,460 feet, and drilled into a depth of 1,685 feet. An abandoned test on the townsite, depth 1,800 feet, is being cleaned out.

N. V. V. Franchot and Wilson Page, of Olean, New York, are on the roster of guests at the Boctookalow Camp of the Oklahoma Hunting and Fishing Club this year, on the site of the camp made by Mr. Franchot two years ago. "Van" Franchot, of course, needs no introduction anywhere in the oil fields, but Mr. Page, although he is president and manager of the Olean Traction Company, is of such a modest and retiring temperament, that he would refuse to take a drink when crossing one of those beautiful spring brooks that abound in the mountains of Oklahoma and Arkansas. He is an enthusiastic hunter of turkey, deer, and bear, all of which are encountered in southeastern Oklahoma.

John E. Schell, of Pittsburgh, Pennsylvania, has been in Tulsa, Oklahoma, a few days, and will be a guest of the Oklahoma Hunting and Fishing Club at its second annual camp in the mountains in southeastern Oklahoma. Mr. Schell and Perry Loughner, as the Minnetonka Oil Company, sold out in Illinois for \$1,250,000 dollars, since which time he made a tour of the world and has been living easy. The family home was at Coraopolis for 18 years, but a new home has been prepared in Pittsburgh. The Minnetonka Oil Company has considerable interests at Cleveland, Oklahoma, furnishing gas and water to the town. Mr. Schell drilled the first well in the Cleveland Field, on the Lowery Farm, in July, 1904.

Harvey W. Barnes, of Bartlesville, and Mrs. Stevens, of Grove, Oklahoma, were married at the bride's home on October 26. After the ceremony period, Mr. and Mrs. Barnes will return to Bartlesville, where their house will be. Mr. Barnes, who is a native of Pennsylvania, coming to Oklahoma 4 or 5 years ago from Warren, Pennsylvania, has been chief clerk and confidential man for George C. Priestley in all his enterprises, and is now assistant manager of the Central Fuel Oil Company. He has also served as city councilman, and is a very energetic and capable young man. Mrs. Barnes is a native Cherokee, of the Mayes family at Pryor Creek, and is finely educated, very attractive, and a social favorite.

Joseph F. Gaume, of Kansas City, Missouri, was a caller at the Journal office in Tulsa, Monday, to subscribe for the paper. Mr. Gaume is an officer of the United Verde Oil and Gas Company, with holdings in several states and territories, and had just returned from Madill, in Marshall County, Oklahoma, where the company has several thousand acres of leases, and is preparing to drill several tests for its holdings, having purchased a drilling outfit. The first test will be located about 3 miles east of Kingston, on an adjoining farm to where a water well, drilled several years ago to a depth of about 400 feet, shows considerable gas. This location is about 5 miles due south of the Arbuckle Farm, on Glasses Creek, where

a number of wells are producing, and which caused the excitement there two years ago. Two tank cars of oil were shipped from these wells last Saturday to the Oklahoma City refinery, the price being 75 cents f.o.b. Madill. A test was completed at Woodville, the second station on the Frisco south of Madill, several weeks ago, that showed considerable oil in 43 feet of sand, before going into salt water in the bottom of the sand. The old cotton gin well in Madill, drilled to 1,500 feet three years ago and abandoned, showed 300 feet of oil standing in the hole last week. W. A. Henshaw, of Madill, just elected as a member of the Oklahoma Corporation Commission, with associates, has secured gas franchises in Madill and two other towns, and it is probable that some steps will be taken to utilize the Madill gas and seek other supplies.

Vol. 9, No. 24, Nov. 24, 1910, p. 4. Questions and answers, p. 3-4. Texarkana, Texas. Nov. 8, 1910. Having become a subscriber to The Journal, I have decided to take advantage of your "Questions and answers" column. I own considerable land in Montgomery County, Texas, and not having been a subscriber until recently, I have not been able to keep up with the oil developments in that section. Please advise me if there have been any wells drilled in that county, and where, and with what result. - Yours truly, F. E. Purifoy.

In reply, we have no record of any wells having been drilled for oil or gas in Montgomery County, and there is no production of oil or gas in that county.

p. 4. New incorporation. Arkansas Natural Gas Company, of Little Rock, Arkansas, increased its capital stock from \$5,500,000 to \$6,500,000.

Lura Oil Company, of Tulsa, \$50,000 capital; incorporators, A. C. Leigh of Grenada, Mississippi, and C. W. Acosta and D. C. Acosta of Tulsa, Oklahoma.

Petrolia Oil Company incorporated at Ft. Worth, Texas, with \$10,000 capital stock, by W. M. Mosier, J. F. Marberry, and others.

Ora Oil Company incorporated at Tulsa, Oklahoma, with \$12,000 capital stock, by P. J. White of Tulsa, and H. F. Sinclair and E. W. Sinclair of Independence, Kansas.

Faith Gas and Oil Company, organized at Faith, Arkansas, with \$200,000 capital stock, by F. C. Holland, H. A. McCoy, H. McGaughy, all of Pine Bluff, Arkansas and others.

Burke-Hoffield Oil Company, incorporated at Tulsa, Oklahoma, with \$10,000 capital stock, by John F. Burke, Henry R. Hoffield, both of Buffalo, New York, and Henry N. Geeis, of Tulsa.

Star City Oil and Gas Development Company, incorporated at Star City, Arkansas, with \$200,000 capital stock: F. C. Holland, president; R. H. Lucas, vice-president; H. G. McGuaghy, secretary; C. M. Philpot, treasurer.

At Marlin, Texas, the Marlin and Reagan Oil Company has been formed, with W. Z. Burke, president; W. M. Gunnell, vice-president, and C. Ward, secretary and treasurer. The company has considerable land leased in the vicinity of Reagan, Texas, and will drill for oil.

p. 4. Trade notes. A permit to do business in Texas has been granted to the Pure Oil Company of Pittsburgh, Pennsylvania, with principal Texas office in Marshall, and a capital stock of \$3,000. The company is doing some drilling in the Caddo District.

p. 8. Personal mention. p. 7-8. The officers of the Texas Company, with a large number of New York and Chicago stockholders, in a special train of 7 cars, arrived in Oklahoma last Thursday, for the annual tour that is made to all the properties. The officers included: J. S. Cullinan, president; J. L. Autrey, general counsel; R. E. Brooks, treasurer, and W. B. Sharpe, all of Houston, Texas; Arnold Schlaet, vice-president, New York; John W. Gates and son Charles C. Gates, heavy stock-holders from New York and Port Arthur, Texas; J. J. Mitchell, Chauncey Kepp, John Lambert, O. C. Wells, L. Thompson, E. L. Brewster, and G. W. French, of Chicago, directors and stockholders; R. C. Holmes, superintendent of refineries; G. I. Noble, manager of the southern branch of the sales department;

C. F. Ireland, manager of the asphalt paving department; W. C. Hogg, son of the ex-Governor of Texas J. S. Hogg (one of the original founders of The Texas Co.), with the land department; E. R. Spotts and V. R. Currie, all of Houston, Texas. About 23 other stockholders were also present.

The first stop the party made was at Bartlesville, where George C. Priestley showed them over the town in automobiles and also accompanied them to Tulsa. Priestley is general manager of the Central Fuel Oil Company which has a contract with The Texas Company to pipe all of Central's production. The Texas Company is doing considerable pipe line and station construction work in the Bartlesville District. In Tulsa, David F. Connolly, president of the Chamber of Commerce, showed the visiting party over the city, and the West Tulsa Refinery of The Texas Company was visited and photographed, after which they motored to the Glenn Pool, taking the cars at Kiefer to Dallas, Texas, where an extensive refinery and distributing business is established. From there they went to Houston, the company headquarters, and to Port Arthur, the refinery and vessel shipping headquarters.

Martin Moran and John F. Black, pipe line and production superintendents for Oklahoma, accompanied the party on their Oklahoma tours, as did J. E. Crosbie, president and manager of the Premier Petroleum Company and The Tulsa Petroleum Company, Holland syndicates, whose production is partly and will be wholly handled by The Texas Company when pipe line connection is made.

p. 8. Recent deaths. Joel Francis Freeman, nephew of John D. Rockefeller and formerly secretary of the Standard Oil Company, died at East Orange, N.J., at the age of 74 years. He became associated with the Standard in 1876, and retired in 1891.

Vol. 9, No. 25, Dec. 1, 1910, p. 8. New incorporation. The Petrolia Oil Company, incorporated at Fort Worth, Texas, capital \$10,000. Incorporators, W. M. Mosier, John F. Marberry, and R. D. Cage.

The Vinita Producing and Refining Company, of Vinita, Oklahoma, filed articles of incorporation at Guthrie, capital stock \$10,000. Incorporators, John T. Milliken, Charles L. Painter, and Louis Helm, Jr., of St. Louis, Mo., and E. M. Corsh of Chelsea, Oklahoma. The company will erect a refinery at Vinita.

C. E. Dittman Oil and Gas Company, of Pittsburgh, Pennsylvania, incorporated at Dover, Delaware, to locate, purchase, and acquire land, to prospect for oil and gas, capital stock \$300,000. Incorporators, W. W. Pipes and Burt Giltaly, of Pittsburgh, and C. E. Dittman of Waynesburg, Pennsylvania. Mr. Dittman is now in Oklahoma to take charge of the property purchased from the Stevirmac Oil Company. H. H. McFann, with Stevens and Irwin, of Sapulpa, Oklahoma, organized the Stevirmac Oil Company. The sale price was \$175,000. The new company is reported as intending to do a lot of drilling.

p. 8, 10. Eastern trade notes. The largest submarine torpedo boat plant in the world is being built at New London, Connecticut, and will be completed early next year. Submarines and their parts will be manufactured at the new plant instead of at Quincy, Massachusetts. Fuel oil engines will also be manufactured on a large scale.

p. 10. Personal mention. Mr. and Mrs. George W. Barnes, Sr., of Muskogee, are enroute to Europe for 8 months. Mr. Barnes, who formerly was a well-known oil and gas operator in Ohio and Indiana, went to Muskogee 10 years or more ago, and has prospered in a marked degree. He is president of one of the strongest banks in Muskogee, heavily interested in another bank there, and one in Kiefer, and has bought several thousand acres of fine agricultural and mineral land in Oklahoma, and until 3 months ago was one of the heaviest oil producers in the state. The Prairie Oil and Gas Company purchased his producing properties, paying him somewhere between \$2,000,000 and \$3,000,000 cash, since which sale he has been taking things easy, and fixing up his mule and horse breeding farm just west of Muskogee, which he will fashion into the greatest breeding farm in the Southwest.

George W. Barnes, Jr., of Muskogee, Oklahoma, is looking after a lease he recently purchased in the Caddo area in northwestern Louisiana, his father and brother being interested with him. A test well is being started, with good production adjoining.

p. 10. Recent deaths. Michael Cudahy, who drilled the Nellie Johnstone in 1897. Michael Cudahy died on November 26, 1910, at his home in Chicago, Illinois from the effects of pneumonia, aged 69 years, having been born in Kilkenny, Ireland, December 7, 1841, coming to the United States with his parents in 1849, and settling in Milwaukee, Wisconsin.

When 15 years of age, he began work in a Milwaukee packing house, and continued in the business to the time of his death. Phil Armour made him manager of his Chicago plant, and later gave him an interest. When the Omaha stockyards were established, Michael Cudahy put up a plant there, or, rather, was in partnership with Armour, finally trading his Chicago interest for Armour's Omaha interest and organizing the Cudahy Packing Company, with Edward Cudahy, the youngest brother, in charge. John and Patrick Cudahy, brothers also, were interested with Michael in plants at Milwaukee, Cincinnati, Kansas City, St. Joseph, Mo., and Sioux City, Iowa.

Michael Cudahy became interested in oil and gas in the Ohio and Indiana fields, laying a pipe line to Chicago, and building a refinery at Kankakee, Illinois, and finally sold all his holdings to the Standard Oil Company some years ago. He became interested in securing leases in Oklahoma and Kansas before oil was discovered, and organized the Cudahy Oil Company, which drilled the first wells at Bartlesville and Muskogee, in the early 1890's, and finally became a heavy Oklahoma producer. The Cudahy Oil Company properties were sold to the National Oil Company 4 years ago, since which time Mr. Cudahy was not actively interested in the Oklahoma fields, until about 2 years ago, when W. H. Isom organized the Cudahy Refining Company, at Coffeyville, Kansas, with headquarters in Chicago, and considerable production has been purchased in the shallow sand fields, and run to the Coffeyville plant, which has a capacity of 1,800 barrels a day, and its operated to the capacity profitably.

Michael Cudahy, several times a millionaire, and at the head of one of the big packing industries, never could refuse the fascination of the petroleum industry, at one time taking up the active exploitation of Alaska for oil. Although a man who lived somewhat to himself, the deceased had many friends who admired him for his steadfast business and personal qualities and traits.

Vol. 9, No. 26, Dec. 8, 1910, p. 12. Oklahoma developments (p. 10-12). The Scipio Oil and Gas Company is starting a second test at Hugo, where a good showing was obtained some months ago.

p. 18. Oklahoma. Completion and drilling records in detail. (p. 16-18).

Miscellaneous. 7 wells drilling, 1 rig up.

Section 23 - 5N -7E, Crossman, Hubbell, and Green No. 1 Thompson . .	drilling
Idabel, McCurtain Co., J. Frye No. 2.	drilling
Indianola, Preston & Co., No. 1	drilling
Stigler, Sulphur Creek Oil & Gas Co., No. 1	drilling
Stigler, Sulphur Creek Oil & Gas Co., No. 2	rig
Wheeler, Santa Fe Railroad Co., No. 50	drilling
Wheeler, Santa Fe Railroad Co., No. 51	drilling
Wheeler, Santa Fe Railroad Co., No. 52	drilling

p. 30. Poteau has natural gas. Poteau, in LeFlore County, Oklahoma, along the Arkansas state line, now enjoys natural gas, the local company having connected the gas well near the town and piped the town, or part of it. The occasion was duly celebrated. Poteau, the most eastern point in Oklahoma where natural gas is found, is about 35 miles southwest of Fort Smith, Arkansas, which is extensively utilizing natural gas from a number of wells in Sebastian County.

p. 30. Oklahoma gas election. Oklahoma Natural Gas Company. At a meeting of the directors of the Oklahoma Natural Gas Company, held at the offices of the company in the Farmers National Bank Building, Pittsburgh, Pennsylvania, the initial dividend of one percent was declared to go to shareholders of record December 9.

The company operates in the Mid-Continent fields, and supplies some 16 towns in Oklahoma, having a combined population of 90,000, and has more than 12,000 consumers. In equipment, acreage, and volume of available gas, it is one of the best fortified in the state of Oklahoma. It holds leases on 15,000 acres of gas territory in the Hogshooter and Mounds Fields, having an estimated capacity to furnish 500,000,000 and 300,000,000 cubic feet respectively. The towns served are Oklahoma City, Guthrie, Shawnee, Chandler, Stroud, Wellston, Davenport, Luther, Edmond, Meeker, Arcadia, Kelleyville, Midlothian, Bristow, and Depew.

The company is capitalized at \$4,000,000 and the stock is held principally by Pittsburgh capitalists. The officers are residents of Pittsburgh as follows: G. T. Braden, president; J. R. Leonard, vice-president; J. H. Evans, second vice-president; R.H. Bartlett, secretary-treasurer; and D. Hastings, assistant secretary and general manager. All are members of the board of directors, of which T. N. Barnsdall, E. P. Whitcomb, and Harry Hensley are also members.

Vol. 9, No. 27, Dec. 15, 1910, p. 4. Personal mention. C. H. Markham, president of the Gulf Pipe Line Company of Pittsburgh, Pennsylvania, has been offered the presidency of the Illinois Central Railway System. He was in Beaumont, Texas, with W. L. Mellon of Pittsburgh, principal owner of gulf, inspecting properties. Mr. Markham began his railroad work at Deming, New Mexico, nearly 20 years ago, serving the Southern Pacific Railroad in California, Louisiana, and Texas, rising rapidly from station agent to assistant general manager. Nine years ago he resigned to become general manager of the J. M. Guffey Petroleum Company at Beaumont, when the Mellons acquired the properties. In January last, Mr. Markham was made president of the Gulf Pipe Line Company, and went from Beaumont to Pittsburgh to direct the affairs of the company. The Illinois Central System has been a Harriman property, with whom Mr. Markham was so prominently connected.

p. 4. Recent deaths. Alanson A. Sumner, a director in the Standard Oil Company, and for many years well known in financial circles in New York City, died recently at his country residence in Stamford, Connecticut, in his eighty-first year. He was born in Albany, New York. He left a fortune estimated at \$15,000,000.

p. 4-6. The only camp hunters. Bogtokalo, Oklahoma. Nov. 24, 1910. The third outing of the Oklahoma Hunting and Fishing Club, passed into history on Thanksgiving Day, 1910, among the atmosphere near Mountain Fork River and Bogtokalo Creek, Ouachita Mountains. The first outing and organization of the club was near Skiatook, along the headwaters of Delaware Creek, in Osage County, and the second outing on Bogtokalo Creek. They left the Pullman car at Cove, Arkansas, and drove 25 miles westward over the mountains, to the camp at the junction of Bogtokalo Creek with the Mountain Fork River. Those present were: G. T. Braden, president; W. S. Mowris, vice-president; Manuel Hirsh, treasurer and ex-officio colonel of the Oklahoma National Guard; H. L. Wood and H. P. Anderson, directors; with members being Clint Moore, Dr. R. D. Rood, Cash M. Cade, W. A. Stuart, N.V.V. Franchot, Wilson Page, Hal Moore, Victor Martin, Dr. Grosshart, P.D.C. Ball, J. A. Steel, John E. Schell, F. M. Kilbourn, and Walter Cash. Cash, after graduating from Princeton University, accompanied Colonel Roosevelt up San Juan Hill, Cuba, so he was made camp athlete. It was 21.3 degrees and the water was frozen. Senator F. M. Kilbourne of Malone, N.Y., dedicated a photograph of the Club Banner. G. T. Braden, president of the Oklahoma Natural Gas Co., injured his ankle. Two years ago, Dave Stewart laid a pipe line over the mountains 2 miles from camp. Most of the club members are oil producers or bankers, or associated with those professions. One member had a dream of purchasing 1,600,000 acres of the Ouachita Mountains, but woke up in time to give it up.

p. 10. Oklahoma developments. Gasser at Ponca City. Miller Brothers, the famous 101 Ranch owners, in a test near Ponca City, on the Santa Fe Railroad not far south of the Kansas state line, in a deep hole test, struck a fair gasser for that part of Oklahoma at 500 feet and saved the gas. Another deep test will be started at once. A Pittsburgh, Pennsylvania man undertook to float a big stock promotion on the 101 Ranch a year or more ago, and drilled one hole to something over 2,500 feet before the balloon collapsed.

Southwest Oklahoma. Local capital at Temple, in Cotton County, experimented with two test wells, and feel so encouraged they will drill two more prospect wells. Some oil has been found all the way down to the Texas line, from 100 feet to 1,300 feet, and the southwestern part of the state has extensive areas of rock and liquid asphalt outcropping as deep as 1,200 feet.

p. 20. North Texas gas. John Sealy & Co., through their subsidiary organization, the Clayco Oil and Pipe Line Co., have completed a 10,000,000 cfm gas well on the Holloway land, in the southeastern part of the Clay County Field, near Petrolia. The Lone Star Gas Company distributes the Petrolia gas through its trunk line to Wichita Falls, Petrolia, Henrietta, Decatur, Bowie, Denton, Fort Worth, Dallas, and adjacent towns along the line. At Wichita falls, 23 miles west of the gas field, a rate of 7 cents per 1,000 cubic feet is charged for industrial plants, and as a result as much gas is consumed in Wichita Falls as in Fort Worth and Dallas combined.

Vol. 9, No. 28, Dec. 22, 1910, p. 1-2. New Year Changes, Gulf Companies. C. H. Markham will be president of the Illinois Central Railway System on January 17, 1911. George S. Davidson of Pittsburgh, Pa., will succeed Mr. Markham as president and general manager of the Gulf Pipe Line Company, the J. M. Guffey Petroleum Company producing branch, and the Gulf Refining Co. operating the Port Arthur refinery. For several years Mr. Davidson was vice-president and general manager of the J. M. Guffey Petroleum Company, after the Mellons acquired the properties, and lived at Beaumont. He is a consulting civil engineer, and with his previous knowledge he is well qualified for the job. F. A. Leovy remains vice-president and general manager, with headquarters at Beaumont, Texas. John F. Fisher continues as superintendent of pipe lines and production. Joseph E. Dutton, who for 22 years was with the Buckeye Pipe Line Co., of Ohio, will be an assistant in the Gulf Pipe Line Company.

p. 2. Little Flights. John D. Rockefeller donated \$10,000,000, a million dollars a year for 10 years, to the University of Chicago. This final gift makes a total of \$35,000,000 that he has donated to that institution.

p. 4. Gas production of Texas. Dr. William B. Phillips, director of the Department of Economic Geology of the University of Texas, recently finished an investigation of the natural gas resources of the state. In 1908, 1,280,052,000 cubic feet of gas was used in Texas, Alabama, and Louisiana, with a value of \$236,837. Dallas and Fort Worth, with 170,000 people, gets its gas from Clay County, at 50 cents a thousand cubic feet, but at Wichita Falls, 7 cents a thousand. Atlanta, Cass County, and Corsicana, Navarro Country, have local supplies. There are 4 known gas fields in Texas in Clay, Cass, Navarro, and Webb Counties. From 1904 to 1908, 421,342 barrels of oil came from these fields. In Navarro County, from 1896 to 1908, the oil produced was 7,446,836 barrels.

Vol. 9, No. 29, Dec. 29, 1910, p. 1. The Barnsdall properties. Negotiations between T. N. Barnsdall and a syndicate of French bankers has been closed, for \$12,000,000, for petroleum properties in West Virginia, Ohio, Indiana, Illinois, Oklahoma, Kansas, Louisiana, Texas, and California. Mr. Barnsdall and W. E. Griffith are now in Paris. This excludes the Pittsburgh Oil Company and does not include gas. France consumes large quantities of petroleum products, and is not a producer and would not care to patronize Germans or Austrians. There is a reason in the deal. Some of the members are interested in a pipe line or railroad to the gulf of Mexico from Oklahoma.

p. 1-2. The Boom and Boost habit. The petroleum industry lends itself naturally to the promotion game, with glittering schemes. Real estate agents boost land values and oil well values. Local newspapers like to magnify the financial status of their prominent citizens and political associates, in the general scheme of exploiting their towns. Government statistics, official reports of individuals and corporations, and reliable reports of bureaus are ignored or discredited, for the purpose of stock promotion for personal friends. Promoters of risky ventures never use official statistics or carefully prepared reports. In some instances, county, state, and federal officials, and appointed censors will either strain a point or omit it altogether to permit a local friend to get a start with some scheme that has no merit. And all along the line, the brother leaves a blazed trail of knocks against the men and statistics that do not help his scheme. "Boost but not knock" is the slogan or rock against which the average "sucker" bumps his head every time he loses a hundred dollars to make a thousand in some booster's game. Of the thousands who have lost to promoters, 80 percent lost by reading and newspaper and 20 percent by answering the mail.

Government statistics are reasonably reliable and are valuable. The reports of New York, Philadelphia, Boston, Baltimore, Port Arthur, Sabine, Galveston, and San Francisco furnish the exports regularly tabulated by the government, and include 96 percent of all the petroleum products exported from the United States. The Journal has been printing these reports regularly.

p. 6. Trade notes. (p. 4-6). Several years ago, the Renfrow Briquette Machine Company installed a briquette-making plant at Haileyville, near McAlester, Oklahoma, for the Rock Island Railroad Company, the intention being to use the briquettes in locomotives. The plant has been kept running to supply domestic fuel trade in Texas, five tons being turned out every working day, with an active demand for the output. (Briquettes are made from slack, uncommercial coal, and pitch left from coal in artificial gas plants, and steamed at 220 degrees F, and pressed into round shapes 2- to 4-inches in diameter, with a fine ash resulting after burning.)

p. 8. New incorporation. The Southwestern Gas Company, of Ponca City, Oklahoma, has just been chartered, with \$20,000 capital stock. The company members are B. C. Wieck, of Ponca City, Oklahoma; E. W. Marland and J.G. McCaskey, of Pittsburgh, Pennsylvania.

American Drilling Company, of Bartlesville, with capital of \$5,000. O. R. Long, L. A. Rowland, and William C. Wilson, incorporators.

Osage Oil Company, incorporated under the state laws of Delaware. Capital \$1,000,000. Incorporators, F. C. Sheldon, J. J. Dunne, F. I. Gallagher, all of New York.

p. 11. Mid-Continent fields, Oklahoma. (p. 10-11.) The Scipio Oil and Gas Company is starting two more tests at Hugo, in southeastern Oklahoma, where a 10 bopd showing was found last Spring.

At Idabel, McCurtain County, just north of Red River, John Frey has abandoned his test after reaching a depth of 1,500 feet.

A test is drilling near Kingston, five miles south of the Madill production.

The Santa Fe Railroad continues drilling at Wheeler.

A test is drilling at Ryan, Jefferson County, two miles north of Red River, and 15 miles east of the Petrolia Field of Texas.

Lawton people are working slowly on a test near that town, down 1,100 feet.

A test is starting near Temple, Cotton County.

This practically covers prospect work in southern Oklahoma.

Near Ponca City, northern Oklahoma, people are drilling a deep test, after getting a very slight gasser in the shallow sand.

Volume 9, No. 30, Jan. 5, 1911, p. 4. Personal Mention (p. 4-6). G. F. Getty, of Los Angeles, Cal., the Osage producer, was in Cleveland, Okla. last week, and secured two leases in Pawnee County.

John R. Reavis, who spent some years in Tulsa, Okla. as correspondent for the Oil Investors Journal, assisting his son Holland, finds the Tulsa climate much to his liking in the winter months, and has decided to settle down there until Spring.

D. A. Herring, an old-timer in the New York and northern Pennsylvania oil fields, and a schoolmate of P. C. Boyle, is now operating an asphalt mine at Ada, Oklahoma, where he has been for several years. Before he went to Ada, he was in the asphalt mining business at Ardmore, Oklahoma. "Dan" was a United States marshal in New York during the Cleveland administration.

Gene Palmer, in charge of the Standard Oil Company's new interests at Caddo, has returned from a Christmas visit to his folks at Findlay, Ohio, and a business trip to New York.

Huntington B. Henry, son of Robert L. Henry, was married January 5, to Annie May Swift, daughter of Edward F. Swift, the Chicago packer. Mr. Henry, who is a graduate of Chicago University and a popular member of Bartlesville society, has had charge of his father's gas interests for some time.

p. 4. Trade Notes. Experts of the Navy are to appear before the congressional committee to explain the advantages in the use of fuel-oil by battleships.

The adoption of oil for the fleet will be an interesting as well as revolutionary event. The general naval board, of which Admiral Dewey is president, has made recommendations which may revolutionize the policies and naval construction of the world. It is recommended that oil be the fuel of the next dreadnaught to be authorized by Congress, which will practically do away with the necessity for naval coaling stations, the navy to be fully equipped with oil-carrying auxiliaries.

The smoke-abatement question has been agitating a number of European cities, and at a recent convention held at Glasgow, strong emphasis was placed upon the desirability of substituting gas and electricity for coal.

p. 6. Recent Deaths. Green McCurtain is dead, aged 67 years, at his home in Kinta, Oklahoma. Mr. McCurtain was a full-blooded Choctaw, and for many years had been the leader of that tribe, having served as representative at Washington, in the tribal legislature and as governor, his last election two years ago being permanent until the closing of all tribal business. He was broad enough to recognize the inevitable, and espoused the progressive policy. The intelligence and fairness displayed by Green McCurtain insured the adoption of his ideas by the Indian department and Congress so far as they could be carried out, and his people had implicit confidence in his judgment and the administration of tribal and individual affairs.

David Bovaird, aged 77 years, died at Bradford, Pa., January 4, 1911. He was born in Glasgow, Scotland, and came to this country when a young man, settling in Allegheny County, Pennsylvania. In the early days of the oil excitement along Oil Creek, he lived at Titusville and Shamburg, and thirty-six years ago removed to Bradford. He was the senior member of the firm of Bovaird & Seyfang, well known as manufacturers of oil well supplies, and upon the sale of his interests in that company several years ago, went into business with his sons under the firm name of Bovaird & Co., with plants at Bradford, Pa., and Independence, Kansas, the latter institution now being known as the Bovaird Supply Company. He is survived by his widow, two daughters, Mrs. John Downes and Mrs. A. B. Booth, of Bradford, and four sons, David, of New York; Joseph, of Bradford; William, of Independence, Kansas; and Walter, of Sapulpa, Oklahoma.

p. 10. New Incorporations. Ingram Oil and Gas Company, of Tulsa, \$50,000 capital. Incorporators, B. B. Ingram, of Rapid City, South Dakota; R. H. Barnett and J. C. Jacobs, of Tulsa.

p. 16-17. Oklahoma Completions and Drilling. December Developments.

Miscellaneous completions.

Ponca City,	101 Ranch Oil Co. No. 2	gas
Miscellaneous Drilling.	9 wells drilling.	
12-9-20,	Sulphur Creek Oil & Gas Co. No. 1	drilling
13-9-20,	Sulphur Creek Oil & Gas Co., No. 2	drilling
Wheeler,	Santa Fe RR. Co. No. 50	drilling
Wheeler,	Santa Fe RR. Co. No. 51	drilling
Wheeler,	Santa Fe RR. Co. No. 52	drilling
Indianola,	Preston & Co., No. 1	drilling
Ponca City,	101 Ranch Oil Co. - Miller Bros. No. 3 . . .	drilling
Lawton,	Local Co., 5 miles south of city, No. 1 . .	1,460 feet
Hugo,	Scipio Oil & Gas Co. No. 2	drilling

Vol. 9, No. 31, Jan. 12, 1911, p. 1-2. Mid-Continent Field in 1910. The Mid-Continent oil field made a new record in 1910, by producing and shipping more crude petroleum than during any previous year. The fields, now known as the Mid-Continent Region, and so denominated by the United States Geological Survey, include the states of Kansas on the north, the state of Oklahoma, the Caddo Field in northwestern Louisiana and northeastern Texas, the Corsicana Field in central Texas, and the Clay County Field at Petrolia, in north central Texas. This consolidation of so great an area into one generic field designation is logical, and not easily avoidable, by reason of the character of the formations and the crude oil. Caddo ranks highest in the grade of oil, but the specific gravity of the crude produced in Kansas, Oklahoma, Corsicana, and Petrolia, is quite similar, ranging from 32 to 40 degrees Baume, with a fraction of the output below 30 degrees. It is only during 1910 that Caddo has been incorporated with the Kansas and Oklahoma fields, because prior to that time, no light oil was produced there, and the statistical tables have not been carefully arranged as yet.

In the four states named, there was completed in 1910, 4,656 wells, of which number 615 were failures, and 494 were gas wells, and the initial new production was 330,534 barrels, from 3,547 producing oil wells, or averaging about 93 bbls/d of oil per well. Oklahoma and Kansas are now producing 125,000 bbls. a day, with the Kansas portion not to exceed 3,000 bopd. Corsicana and Petrolia produce under 1,000 bopd. The total for the Mid-Continent is 146,000 bopd production for 1910.

In 1910, total production of the Mid-Continent was approximately 54,660,000 barrels of oil, with Oklahoma and Kansas at 49,459,580, Caddo 5,000,000, and Corsicana and Petrolia about 200,000. The pipe lines paid 30 cents to 44 cents a barrel.

In Oklahoma in 1910, there were 3,882 wells completed, of which 423 were dry holes, and 174 were gassers, with new initial production of 232,888 bopd.

About 28 miscellaneous wells were completed outside of the normal drilling districts of northeastern Oklahoma, representing the total activity in the rest of Oklahoma for 1910.

p. 6. Little Flights. (p. 4, 6). During the latter part of 1910, thirty banks were burglarized in Kansas, and quite a number in Oklahoma. The bank commissioner of Kansas says it is all Oklahoma's fault for raising so many criminals.

p. 6. Trade Notes. A number of Texas capitalists have leased lands near Doddridge, about twenty miles south of Texarkana, and according to Capt. R. H. Bruce, who is representing the company on the ground, drilling for oil will be commenced immediately.

p. 10. Recent Deaths. (p. 10-12). Charles Bremner Hogg, One of the organizers of the Standard Oil Company, died suddenly at his home at Rye, New York, Friday last. Mr. Hogg was born in Cromarty, Scotland, on April 13, 1834. After graduating at the University of Edinburgh, he came to this country. He was one of the pioneer refiners of oil, and when the Standard Oil Company was organized, Mr. Hogg turned his refinery into the company, and was active in its organization.

He retired from active business many years ago, and in recent years, has spent his winters in Florida and his summers at his country place in Rye. Mr. Hogg is survived by two brothers, the Rev. John Hogg of Winnipeg, and Robert Hogg, of Brooklyn, and by three daughters, Mrs. Edwin P. Lindridge, Mrs. Thomas Young Crafts, and Mrs. Lascelles Chester Maxwell.

p. 12. William T. Wardwell, former treasurer of the Standard Oil Company, and Prohibition candidate for mayor of New York in 1897, died Tuesday, January 3, of neuralgia of the heart. Mr. Wardwell was in his eighty-fourth year, and had been suffering from slight attacks of his ailment for some time. The fatal attack occurred while returning to his home in a taxicab. He was taken into Hotel Latham and given hurried treatment but without avail. Mr. Wardwell's ancestors came to this country on the Mayflower. He was born at Bristol, R. I., in 1827. Educated as a chemist, he took to refining oil, and started a company on Long Island. This company prospered until the time of the forming of the Standard Oil Company, when it was taken over, and Mr. Wardwell became associated with the Standard. He was the father of the employees' pension system in that corporation. He had been associated with the Red Cross Hospital Association since 1897. When the association was facing ruin, Mr. Wardwell came to its rescue with a gift. Later he contributed \$100,000 toward a new building, and since that time he had taken upon himself the monthly deficit of the hospital, whatever it happened to be. At the time of the Spanish War, Mr. Wardwell, Levi P. Morton, Dr. Lesser, and the late Dr. George F. Shradly and the late Bishop Potter were commissioned by President McKinley to establish the National Red Cross Committee. It is computed by one intimate with him, that he gave away two thirds of his income. He leaves an invalid wife, who was Martha W. Ruff of Rahway. His first wife was Eliza W. Lantermann, of Buffalo. His son, Allen C., is married to the daughter of Francis Lynde Stetson, and his daughter is Mrs. Frank Jones, of Montclair.

John D. S. Neely, of Lima, Ohio, aged 60 years, was shot and instantly killed in the Palace Hotel at Caney, Kansas, at 7 o'clock Saturday morning, January 7, 1911. Mr. Neely was born near Butler, Pa., and followed the oil fields and settled in Lima many years ago, where he was president of the Lima Trust Company, and interested in a number of oil and gas companies, associated with his brother, L. S. Neely, J. H. Kerr, and others. At the time of his death, he was president of the Wichita Natural Gas Company and the Wichita Pipe Line Company, piping natural gas from Oklahoma and Kansas to Wichita and intermediate towns. He was also interested in the Iron Mountain Oil and Gas Company, owning a large acreage in Oklahoma, with a large production in a number of fields. His personal fortune is rated at \$2,000,000. The widow, a daughter, and two sons survive him. Fred M. Neely lives at Independence, Kansas, and is general superintendent of the Wichita Natural Gas Company, the pipe lines, compressors, and general affairs of the company; Milton, living at Lima, as does the daughter. A dispute over an oil and gas lease, the Robert Goodman allotment in Oklahoma, four miles southeast of Caney, with A. O. Truskett, who has lived at Caney many years, resulted in a lawsuit now pending, with the first decision favoring the Wichita Gas Company. Mr. Neely and Truskett were sitting in the hotel office Saturday morning, when Mr. Neely got up to go to the toilet. Truskett followed, and the shooting immediately followed, in the back hallway. One bullet struck Mr. Neely in the left arm, the second one passing through the heart. No one saw the shooting, or heard any words that may have passed between the two men. Truskett claims that Mr. Neely held his arm in a position that caused him to believe he was pulling a gun, and he fired immediately in self defense. This story is believed by no one, as it does not comport with the character of Mr. Neely, and he was unarmed. Truskett was later arrested and placed under \$12,000 bond, and the preliminary hearing was held Tuesday. The shooting was deliberate assassination with no mitigating circumstances, and was a great shock because of the wide acquaintance of the deceased, and his prominence in oil and gas circles.

p. 14. New Incorporations. Tuscaloosa Oil and Gas Company, of Tulsa, Oklahoma; capital stock \$6,000. Incorporators: Theodore Cox, Otto Aulbach, and V. V. Lane, all of Tulsa.

p. 14. A remarkable Ship. A noteworthy and probably epoch-marking ship of large dimensions has been ordered by the Hamburg-American Line, to be built in Hamburg, in which, for the first time, certainly as far as the German marine is concerned, the steam boiler and external chimneys will be eliminated, and explosive engines substituted for steam engines. The vessel is to be 8,000 tons, and therefore sufficiently large to test the claims, or rather hopes, set up in regard to the new explosive engine type upon which the success or failure of this experiment will turn. Lenoir, the first builder of the explosive engine, was quick to perceive its advantages for ship-propelling purposes, and himself built one in a boat; but while many and rather large gas engines for marine purposes have been constructed since, it has been impossible until now to obtain a type of proved efficiency and security for large ships, and the application of available engines has been limited, therefore, to small and swift traveling craft. However, while the imperfections of the existing gas engines for large ships have been felt, the advantages of the oil-burning vessel have been such that their partial realization has been attained in many instances by firing steam boilers with oil...Now the explosive engine has progressed logically from the simple working 4-cycle to the double working 2-cycle type. In its basic form, every such engine of the 4-cycle type yields a power impulse at every fourth stroke upon the piston, and then upon one end of the piston only. The following is an example: Stroke 1, intake of air; stroke 2, compression and heating of air; stroke 3, introduction and ignition of fuel and development of gas which drives the piston forward; stroke 4, expulsion of burnt gases. The 2-cycle type was developed from the 4-cycle, and in it, the first and fourth strokes were omitted. Two oil-consuming engines will be built, each of three cylinders, developing theoretically 1,500 horsepower at 120 revolutions per minute.

p. 16. The Poteau Gas well. An officer of the Poteau Light and Ice Company of Poteau, Oklahoma, writes as follows regarding the Poteau gas well: In March, 1910, the Coronal Oil and Gas Company, which company is composed of some New York and Chelsea, Oklahoma, parties, began the drilling of a well three and a half miles east of Poteau. Professor Gould, the state geologist, has been quite sanguine of a good find of oil or gas, or both, in this section. The well as completed in July, resulting in a flow of gas, 2,100,000 cubic feet per day with a pressure of 900 pounds. Improper methods failed to successfully hold the gas in the well, and it was in September that it was successfully shut in, the well having flown wide open for practically sixty days. On gauging the well again in September, it was found to have drilled itself in and was flowing 5,500,000 cubic feet of gas per day. It was connected on to the pipe line of the Poteau Light and Ice Company in November, 1910, and is now supplying the town of Poteau with gas.

The Coronal Oil and Gas Company holds leases on several thousand acres of land surrounding this well. It is only a producing company, selling its gas to the Poteau Light and Ice Company, which is a separate and distinct corporation, the two companies being owned by different parties. Arrangements are now being made to resume drilling, the exceedingly dry weather having shut off further drilling for lack of convenient water. One desirable feature of the gas well was that the gas comes from a continuous sand of 225 feet in thickness, at depth 1,685 feet. A small showing of oil was had at 1,550 feet, but the sand is exceedingly tight, and oil in quantities is not anticipated in that particular well.

Vol. 9, No. 32, Jan. 19, 1911, p. 4. Trade Notes. (p. 4, 6). Charles T. Madison, of Muskogee, Oklahoma, is working on an oil refinery at Fort Smith, Arkansas, with Muskogee and Fort Smith associates. His plan is to ship Muskogee crude down the Arkansas River to Fort Smith by barge. Mr. Madison established the Muskogee Oil Refining Company when the Muskogee Field was first opened seven years ago, moving the plant from Corsicana, Texas, where he was associated with Capt. James Garrity,

of Corsicana, and the Abeels of Waco.

D. W. Franchot & Co. (N.V.V. Franchot and his son Douglas W.), announce that they have purchased the rights to make gasoline from casing-head gas by means of the patented process of the Liquified Gas Company of Bolivar, N.Y., the purchase covering all territory in the United States west of the Mississippi River, and foreign countries. They are hastening the completion of one of these plants on their oil lease at Kiefer, Oklahoma, and when finished, desire oil producers to inspect the plant and its workings, and will furnish any explanations and information desired. The Kiefer plant will handle 200,000 cubic feet of gas a day. They say that casing-head gas coming with crude oil carries from two to three gallons of gasoline per 1,000 feet. It is the purpose of Franchot & Co. to sell outright for a stated price, a complete plant for making water-white gasoline of 86 degrees Beaume or higher. They already have four gasoline plants in operation on their Kiefer lease.

p. 6. Personal Mention. Moses Weinberger, of Guthrie, has organized a company of Guthrie people to drill a deep test for gas and oil at Guthrie, with considerable acreage leased. A fund of \$10,000 has been raised for the work. Several years ago, R. H. Hardenburgh drilled a test to 2,800 feet at Meridian, ten miles southeast of Guthrie, in which a showing of gas was found.

B. G. Dawes, who has been looking after the Vivian Oil Company property in the Caddo Field while C. W. Lemon, secretary of the above company is away on a visit, left for Little Rock, Arkansas, January 12, and met the officers and directors of the Arkansas Natural Gas Company, Mr. Dawes being a large stockholder in the company, also owning the gas plant in Little Rock. January 14 was Mr. Dawes' birthday, being 41 years old on that date. W. C. Wolff, superintendent of the Wolff Drilling Company, R. W. McIlvane, local manager of the Arkansas Gas Company, and C. W. Lemon, attended the celebration.

W. M. Dunham, the statistician and traveler of oil fields in the United States, Canada, Mexico, is enroute to Tampico, Mexico, where he expects to remain some time. Born in the heart of the Pennsylvania oil fields, Mr. Dunham's earliest work was around oil and gas wells, and he has followed the business and the fields ever since, from tool-dressing, drilling, pumping, superintending, and making expert reports to gathering statistics relating to petroleum and natural gas. His collection of data in files, scrap-books, and tabulated matter is the most complete one in the country, covering everything from 1859 to 1911. The Mexican interest that secures his services will profit.

C. F. DeGolier, the well known contractor, has returned to Oklahoma, after a holiday visit with Mrs. DeGolier and the children, at Cambridge Springs, Pa. His tools are running in the Preston and Tiger Flats Districts, and he gets his mail at Preston.

W. B. Noble, of Alva, Woods County, in northwestern Oklahoma, was a Tulsa visitor Thursday. Mr. Noble is drilling a test well in an Alva suburb, and has reached a depth of 3,473 feet, with a 5-inch hole, and will continue drilling. Several sands have been drilled through, that showed a trace of oil and gas, the last gas appearing at about 3,100 feet, and the tools are now working in a limestone formation, plenty of lime appearing all the way down. The "red beds", the disreputable formation of western Oklahoma, were 1,100 feet thick, and left behind early in the work. Mr. Noble has just contracted to drill a deep test near Oklahoma City, starting with a 13-inch hole, and is now assembling his material.

p. 8, 10. Standard Oil Case Argued. Washington, D.C., Jan. 17, 1911. Before the Supreme Court of the United States, the question of dissolution of the Standard Oil Company of New Jersey, alleged to be violative of the Sherman Anti-trust Law, was argued at length by eminent counsel. The opening argument was made Thursday for the defendant by John G. Milburn, of New York. Mr. Milburn's task was to present to the court the facts in the case.

In his history of chaotic conditions in the oil business between 1860 and 1870 due to an overproduction of refining capacity, Mr. Milburn introduced to the court the character of John D. Rockefeller. "There was out there in Cleveland

a young man in the early 60's, with a small amount of money which he had saved, who possessed the gift of genius. He had the genius for business, and there is a genius for business, just as there is a genius for war, or poetry, or painting. That man was John D. Rockefeller. He saw that this overproduction of refineries was to be met with a volume of business so as to withstand the lower profits." He then told how Rockefeller allied himself with Andrews, a practical oil refiner, and how they grew rapidly.

The Standard's Growth. Mr. Milburn dwelt particularly upon the period of acquisition, which he said closed in 1879, the trust agreement of 1882, and the new arrangement of ownership in 1899. Acquisitions never had been made with an intent to restrain or to monopolize interstate trade. Most of the purchasers were made before 1879. "We thought that it was only the decent thing to do, if a man came to see us with a proposition to sell out, to buy his plant at its appraised value. Often it was practically worthless and we could have permitted it to go to dry rot in his hands." He denied charges of preferences from the railroads during the period of acquisition. The contracts between the railroads and the Standard were not in restraint of trade "when viewed in the light of the days in which they were made." Even the history of the South Improvement Company was not a restraint of trade. He explained that the South Improvement Company was incorporated in 1872, upon the insistence of the railroads. The railroads and oil refiners were parties to it. They were to carry on a common business, and distribute the profits. The State of Pennsylvania repealed the charter of the company before it could carry a ton of freight.

The Disputed Exchange. The trust agreement of 1882, whereby trustees exchanged their certificates for the stock of the various "common interests" of the Standard Oil Company, came in for much attention. Mr. Milburn maintained that the Supreme Court of Ohio did not decide that the 'trust' was illegal, but simply required the Standard Oil Company of Ohio to withdraw from the trust agreement. His remarks about the reorganization into the Standard Oil Company of New Jersey in 1899 which is the thing which the decree of the lower court would undo, was summarized by Justice Hughes: "The net result is that the Standard Oil Company of New Jersey after 1899 stood in the place of the trustees, and those who held the certificates issued by the trustees thereafter held the stock of the Standard Oil Company of New Jersey." "Precisely", said Mr. Milburn, "There was the same body of common owners of the property both before and after 1899." Milburn argued that the new arrangement of 1899 did not suppress competition in any way, because the properties before 1899 were not competing, they being owned by the same persons.

Result of a Decree. One objection to the decree was that by compelling the Standard of New Jersey to give to each of its stockholders a proportionate share in each of the corporations whose stock it held, the small holders of stock would be seriously embarrassed. The decree would be ruinous to much of the properties because the companies had no independent existence, from the point of view of value. Milburn said "Damned for anything but praised for nothing, was the way the Standard Oil has been treated by the government. In this record, covering 40 years of business, everything the Standard has ever done is related. It has done some things in strenuous times it should not have done; that was human. It has done nothing that goes to the issue here.

Mr. Kellogg's Argument. On Friday, Frank B. Kellogg, special assistant to the attorney general, tried to show that Standard of New Jersey should be dissolved, in accordance with the decree entered by the Federal Court in Missouri. He said that the 1899 re-organization amounted to the substitution of one illegal form of holding together the oil companies for another illegal form. The first was that of the "trust of 1882, with its several trustees, and the second the Standard of New Jersey." When Mr. Kellogg talked of the trust of 1882, he was interrupted by Justice Holmes, who remarked "That sort of agreement was quite common in New England". Mr. Kellogg replied, "I have no doubt of that. The trust agreement was copied by the 'sugar trust', which was declared illegal in New York, by the 'whiskey trust', which was declared illegal in Illinois, and by the 'lead trust', which was declared illegal in Missouri. The plan has

been condemned as in restraint of trade in every state of the Union. And when the Standard Oil Company of New Jersey succeeded the trustees, the properties were simply turned over from one to the other. A perpetual corporate form that should hold their common wealth was substituted for the trustees, whose lives might be cut short by death. Is any one more legal than the other?"

Says Trust is Illegal. If the companies whose stock was procured by the Standard in 1899 were not competing, it was because they were held together in illegal trusts, that of 1879 and that of 1882. "Take away the fear of persecution by the government, and the Standard Oil Company would put every independent in this country out of business in five years", Mr. Kellogg continued. "The independents can exist only under the protection of the law." Chief Justice White asked if the complaints against the Standard companies were based upon their methods, and if objection was made to the methods because illegal. "That and size", responded Mr. Kellogg. "Great wealth enables them to use methods, some unfair, which would not be illegal or reprehensible in the hands of the corner grocery man." Justice McKenna suggested "Suppose they are a giant, but do not use a giant's strength." Kellogg replied, "They'd use that power were it not for the law."

Profits Evidence of Monopoly. Mr. Kellogg said that the record did not show where all the profits went. For instance, there was nothing to show what happened to \$23,000,000 out of the earnings of one small pipe line that was paid to P. S. Trainor. "Who is this man Trainor?" inquired Justice Lurton. "Oh, he's a purchasing agent in New Jersey," said Mr. Kellogg. "I tried in every way to learn where that little sum went. The officials of the Standard, when on the stand, told me that they could not find out. Mr. Milburn once said that he would not gratify my curiosity by telling me." Large profits at home were regarded as justified to offset small profits in foreign lands. "Build up the foreign trade if you can," said Mr. Kellogg, "but I deny the right to do so at the expense of American men and women."

Alleges Unfair Rates. Mr. Kellogg dwelt upon discriminatory rates in transportation. "The Standard Oil Company had directors on the boards of directors of most of the big railroads of the country. When it is shown that independents could not get rates that the Standard did get, it is sufficient." Justice McKenna wanted to know how the decree would prevent the continuation of such methods. Mr. Kellogg replied that none of the separate companies would be big enough to carry on such methods.

Attacks Court Decree. D.T. Watson of Pittsburgh, attacked the decree of the lower court. He said that the Circuit Court held that the defendants had done nothing after the 1890 passage of the Sherman Antitrust Law, to violate that act. They conveyed the properties held together for years by a lawful body of men to the Standard Oil Company of New Jersey in 1899. The Standard did not gain a single power by reason of the conveyance, and the properties were noncompetitive before 1899, remaining the same afterwards. "We did not present any alien property in the new organization," he said, "only joint property was changed from the trustees to a corporation. How could the Standard Oil of New Jersey restrain trade by such a conveyance?". He believed that the Circuit Court believed that it had to follow the decision of the Supreme Court in the Northern Securities case, the railroads owing a duty to compete and engaged in active and actual competition. He said that the Standard had no duty to compete and the companies were not in competition with one another. Mr. Watson also argued that the decree amounts to confiscation of property because it does not allow the subsidiary companies to pay dividends to the Standard Oil Company of New Jersey, making the stock worthless.

Mr. Wickersham, following after Mr. Watson, defended the decree, pointing out that the lower court held that a conspiracy to restrain trade had been found, and that the conveyance of 1899 was made in pursuance of that conspiracy. The effect of the 1899 reorganization, he said, "was to rivet the control of one hand over the twenty companies, a control that neither death, taxes, nor financial ruin could rend. Before; the separation of the stock of one of the certificate holders would have disintegrated the control; After; by the reorganization, a

perpetual, immortal element was accorded the control."

The Closing Argument. John T. Johnson closed for the Standard Tuesday. He said that it was significant that the government had to go back 40 years to get evidence. Also the government colored the picture by saying that 114 companies were in the combination, forgetting that 49 were organized in foreign countries, 16 not included in the bill, and 14 others discharged. He said the government must define the meaning of restraint of trade and of monopolizing under the Sherman Antitrust Law, now being unwarranted, vague, or indefinite. He said that monopolizing is the exclusion of others illegally from their business, which the Standard did not do, but instead competed with their brains and hands. The country does not suffer by mere largeness of corporations. Instead. "without these corporations prices would be higher; hundreds of millions of men would be deprived of employment, and our foreign trade, more and more dependent on our manufacturers because of the alarming increase of growth of our population which consumes our agricultural products, would be destroyed. We should have no chance in the competition of the world for trade with a rival like Germany, the most intelligent of them all, which by settled legislation fosters the combination which you are asked to condemn as criminal."

The members of the Supreme Court balked at reading the entire record of 22 volumes, 500 pages each. Chief Justice White asked defense attorney Milburn if it would be necessary to go over the entire record, and Mr. Milburn said no, and that the Standard's brief covered the facts. Mr. Kellogg said that only the government's brief told the cold unbiased facts.

The case rested until May 11, 1911.

p. 12. Geologist Clapp's Views. Frederick G. Clapp, before the Pittsburgh meeting of the Geological Society of America, December 29, 1910, read an interesting paper entitled, "Notes on the geological relations of oil pools situated in regions of monoclinial structure." Geologists and oil men have generally assumed that geological structure was of little assistance in predicting the positions of pools situated on monoclinial dips. The main object of this paper is to show that geology is of great value in this class of oil fields, and that good predictions can be made. In the great majority of cases it has been discovered that oil has accumulated at positions where the change in rate of dip is locally pronounced, and that the size and productivity of the pools is commonly proportional to the abnormality of the generally uniform dip. The positions of accumulation are also influenced by structural 'ravines' crossing the sand. Although the structure of the sand may be quite different from that of the surface formations, it can, nevertheless, be calculated in a considerable degree of accuracy from the surface, by taking into account the change in intervals, which is comparatively uniform for a given locality.

p. 18-21. Mid-Continent Fields. p. 18. An Arkansas Test. The Crescent Drilling Company, a Sapulpa concern, is starting its second test at Waldron, Arkansas, about 30 miles south of Fort Smith. The first test, drilled last summer, 800 feet west of No. 2, had a showing of gas enough to run the boiler. This location is east of Poteau, Oklahoma, where a fair gas well is furnishing fuel to the town. Four strings of tools are running in the Fort Smith Gas Field, both east and west of the town, and some fair gas is obtained, the last well, eight miles east of the town, showing 3,500,000 feet.

p. 18. Southern Oklahoma. The United Verde Oil and Gas Company, with 9,000 acres of leases in Marshall County, Oklahoma, on Red River, is starting two test wells near Kingston and Woodville, south of Madill, where some excitement existed a year or two ago, the producing wells being located on Glasses Creek two miles southeast of Madill. Should these test prove failures, the United Verde Company will move the rigs into the Cherokee Country and drill for production. Joseph F. Gaume, of Kansas City, and W.D. Coldren, of Ochelata, are interested in the United Verde Company.

p. 21. Texas-Louisiana-Arkansas Wildcats. The Sandy Creek Oil Company, near Calvert, Texas, has a showing at 927 feet.

The Trinity Oil and Gas Company, capitalized at \$10,000, will drill a test one mile east of town.

Local parties drilling at Faith, Arkansas, 12 miles southwest of Pine Bluff, are encouraged over a reported showing at 1,200 feet.

Bridgeport, Illinois, parties are going to make a test at Dunn, Arkansas, four miles northeast of Faith, drilling the well with cable tools.

Harper and Little are drilling a well 12 miles southeast of Texarkana for the Texarkana Oil and Gas Company.

Vol. 9, No. 33, Jan. 26, 1911, p. 1. Little Flights. January 30 has been finally made the date for the committee from the Oklahoma Oil and Gas Producers Association to meet with the Secretary of the Interior Department to consider Osage Reservation leasing regulations. The committee comprises: George C. Priestley and Frank Phillips of Bartlesville, and Archibald Campbell and E. R. Perry, of Tulsa, Mr. Perry being president of the association. Mr. Priestley is vice-president and general manager of the Central Fuel Oil Company; Mr. Phillips is a banker and producer; and Mr. Campbell is a producer and broker.

p. 4. Recent Deaths. (p. 3-4). Solomon R. Dresser, aged 69 years, died at his home in Bradford, Pennsylvania, on January 20, after an illness of four years, during which time he was a helpless invalid. He was born at Litchfield, Michigan, on February 1, 1842, settling in Bradford in 1878, from which district he was twice elected to Congress. Mr. Dresser became widely known through his patent of an oil and gas well packer, and later by designing a coupler for gas lines, known as the Dresser coupler, and in universal use wherever natural gas is piped. Surviving the deceased are the widow, one daughter, Mrs. F. A. Miller, three sons, Robert A., Carl, and Richard, all of Bradford, and a sister, Mrs. Abigail Burchard of Chicago. Mr. Dresser was one of Bradford's most influential, respected, and progressive citizens.

p. 4. Western Texas. Marathon, Texas, Jan. 18, 1911. I see by your latest edition mention of nearly all prospective oil fields except Marathon, Texas. We think we have an oil field here of no mean proportion, if properly developed. I will send you a copy of a geological report on nine sections, of which a local company, composed of ranchers, holds a lease, and is trying to develop with inexperienced men. They purchased a large Keystone mounted machine, and commenced drilling a 14-inch hole, six weeks ago today, and by constant hammering with a 4-1/2 X 35 stem, have reached the depth of about 280 feet, in a formation of lime, shale, and sand. The test is located in Section 43, Block 4. In this same section, a well was drilled a year ago to a depth of 980 feet, at which depth a fine showing of oil was struck, but the water was not cased off, and unfortunately the tools were lost in the hole, and the parties suspended operating for want of funds. We need oil men of experience to develop this country. From my experience of 40 years in the oil business, as driller and manager, I can see that the field will not be developed unless men of means and experience can be induced to come and investigate the possibilities. Thousands of acres of land can be leased or bought at very low figures if the right parties come here with the determination to develop the country. The geological investigations reveal the presence of shale and formations necessary to the existence of oil and gas. An anticline bears a little west of south. The oil-bearing formation should be found at about 1,200 feet, and gas at 1,000 feet. Strong sulphur water will be encountered between 700 and 1,000 feet, and provision should be made to shut it off when drilling. After passing through this sulphur stratum, no other water of account will be found until the 2,000 foot level is reached, but the indications are that any oil existing in that basin will be found above that level. The Marathon Basin is well defined, and was formed by erosion and subsequent settling, with an impinging crust from the north. The presence of granitic formations has been noted. Heavy gas may be expected. - J.R. Osborne.

p. 12. Texas-Louisiana Wildcats. John R. Arnold, E. B. Alford, D. R. Harris, W. P. White, and O. P. Boynton have organized the Milville Oil Company in Rusk County, Texas, with \$25,000 stock, subscribed to prospect for oil and gas.

The West Coal Mining and Development Company has found a gas pressure in a test well drilled in the Holloway Mountains near Coleman, Texas. Gas pressure was also found at Putnam, east of Abilene.

The Stonewall Oil and Development Company has been organized at Rule, Stonewall County, north Texas, to prospect for oil and gas, and expects to be drilling by February 1.

A showing of oil and sand was found in a test drilling at Kemp, Kaufman County, Texas, southeast of Dallas, at about 900 feet.

The Natchitoches Oil and Gas Company's test at the town of that name is down 900 feet. Surface indications are said to be very favorable. John Champion, well known in Caddo and Texas fields, who has been drilling on the well, has resigned, Lee Cook taking his place.

Local parties drilling a well at Gurdon, Arkansas, in Clark County, report an asphalt bed at 250 feet. The hole is now about 400 feet deep.

p. 17. A Guthrie Company. The Guthrie Gas, Oil and Mineral Company was incorporated last week at Oklahoma City, the capital of Oklahoma, at the hour of going to press, the capital being \$25,000. The incorporators are William Weinberger, J. J. Tearney, Frank Galbraith, L. H. Matchett, J. B. Fairfield, Felix Adler, and L. I. Bealand, all of Guthrie, Oklahoma. The company will at once look for oil or gas or any other mineral of value.

p. 20. Gas Notes. The Busch-Everett syndicate, of St. Louis, deposited a \$50,000 bond, secured by a bonding company, to pipe natural gas into New Orleans, Louisiana, within two years, and was granted a franchise. The time limit will expire in the Fall of 1911. It is now impossible for the company to comply with the requirements, and the city of New Orleans will demand payment of the guarantee bond. Since the granting of the franchise, it has been demonstrated that the Caddo Gas Field is not a safe base of supply for a line 300 miles long, and the plan to pipe Caddo gas to St. Louis has also been abandoned for the same reason.

Vol. 9, No. 34, Feb. 2, 1911, p. 4. Recent Deaths. George W. Barnes, Sr., of Muskogee, Oklahoma, died suddenly in Monte Carlo, Monaco, at 3 o'clock on Saturday morning, January 28, of cancer of the stomach, aged 62 years. Mr. and Mrs. Barnes went abroad in November last, to be absent about a year and enjoy a complete rest and recreation, after a very active life in the petroleum industry and in banking, he having just sold all his Oklahoma producing properties to the Prairie Oil and Gas Company for close to \$3,000,000. Mr. Barnes was born in Syracuse, N.Y., September 17, 1849. In 1877, he was united in marriage to Miss Alice Young, at Honesville, Pa., and for some years lived at Toledo, Ohio, having been interested in the Ohio and Indiana oil and gas fields. About 10 years ago, Mr. Barnes moved to Muskogee, Oklahoma, where he has since lived. He was president of the Commercial National Bank, and a director of the First National Bank of Muskogee, and a heavy stockholder in the Pioneer Telephone and Telegraph Co., and owned a great deal of Muskogee city property and a large acreage of agricultural, oil, and mineral lands in the state. When the Glenn Pool was opened, Mr. Barnes, along with his two sons and associates, acquired extensive holdings, and became the heaviest individual producer in that wonderful district, as is evidenced by the price he obtained when he sold, the daily production at that time being 5,000 barrels. For months, this oil was all shipped by rail to Texas for refining. Recently Mr. Barnes began the development of a modern stock farm, or ranch, three miles west of Muskogee, more particularly for the raising of fine mules and horses, and was getting it in fine shape. He was of large and rugged physique, great energy, and daring commercial and financial temperament, and had reached a position in the new state where his ambitions had been well satisfied, and he was preparing to setting down to the enjoyment of the fruits of his energy,

knowing that his sons were embarked in successful business. Until the management of his petroleum interests had been transferred and he had a breathing spell, his health had never bothered, and when he sailed nothing serious was anticipated. It was not until the specialists at Monte Carlo diagnosed cancer of the stomach that either he or the family thought anything was wrong. But like so many strong, resourceful men, the minute the tension was relaxed, the end came quickly. He is survived by the widow, one daughter, Mrs. J. Secor, of Toledo, Ohio, two sons, George W., Jr., and Horace Y., both living at Muskogee, two brothers, one in Syracuse, N.Y., and the one in Denver, Colorado, and one sister living at Evanston, Illinois. The body will likely be buried at Toledo, Ohio.

p. 4. In Memorium. (with picture). Solomon Robert Dresser, who during the past four years had been an invalid, died at his palatial home, No. 149 Jackson Avenue, Bradford, Pennsylvania, Friday morning, January 20, 1911. at 8:25 o'clock. While it was known in the community that he had permanently lost his health and vigor, the news of his death came as a great surprise. Mr. Dresser had taken frequent carriage rides, and his strong constitution had held up persistently against the ravages of the ills that afflicted him. Cerebral hemorrhage, the third of a series of like attacks, caused his death, and the announcement that the end had finally come was received with much sorrow by the public. As a neighbor and a citizen, he was highly esteemed by the people of his home city.

The deceased, since 1878, had been resident of Bradford. Here, in the years gone by, he had worked assiduously to build up a great industry as a manufacturer, and he had been remarkably successful. In addition to his private business affairs, he has been identified prominently with public matters. He was formerly a trustee of the Carnegie Public Library, and with his estimable wife, took a practical, helpful interest in the Bradford Hospital. Civic improvement appealed to him strongly, and he was never backward in giving financial aid and personal encouragement to uplifting movements in the community. He was one of the leading citizens of this section of the state.

Mr. Dresser was born in Litchfield, Hillsdale County, Michigan, on Feb. 1, 1842. He received there a common school education and later was a student at Hillsdale College. His early life was passed upon his father's farm in that vicinity, and in 1865 he located in West Virginia. From there, later he went to Butler County, Pennsylvania, where he was identified with the oil business. He was of an inventive turn of mind, and became interested in the manufacture of oil well and pipe line appliances of different kinds. He invented and patented the Dresser oil and gas well packers, and the Dresser pipe couplings, and improved them to such an extent that they became known as the best fixtures of their kinds obtainable. The excellence of the packers and couplings caused them to be in great demand, and for years they have been most extensively used in the oil and gas regions of the world. As a consequence of this demand, the business grew rapidly, and necessitated enlarged manufacturing facilities. A greater plant was erected in the lower section of the city, when the original Dresser establishment, located in Patent Place, became inadequate in capacity. Then was formed the manufacturing corporation which still carries on the business. And parts of the different devices formerly manufactured elsewhere became the output in their entirety at the new plant.

Mr. Dresser, in politics, was a Republican, and he was prominent in the affairs of his party. He was elected a member of the Bradford City Councils many years ago, and in the local law-making body was an efficient and active councilman. Subsequently he became the candidate of the Republican party in the 21st District for a member of Congress. To this important office, he was twice elected, and he served his constituents ably and faithfully. To his efforts, Bradford is indebted for the federal building that is soon to be erected here.

He was prominent in Masonry, and held offices of honor and trust in the local branches of the order. He was one of the prime movers in the erection of the Masonic Temple in this city, and always took a deep interest in the welfare of the fraternity. He for three terms was district deputy in the Masonic district, comprising McKean and Potter Counties, and was widely known throughout the country

in Masonic circles.

He was a member of the Pennsylvania Society of New York City, and belonged to the Duquesne Club of Pittsburgh, and to the Bradford Club, the Merchants Club, the Country Club, and Edgewood Club, all of Bradford, and was a member of the Ellicott Club of Buffalo.

Mr. Dresser was personally a most congenial and friendly man. He was generous and sympathetic. No worthy cause would be allowed to pass unaided if its merits were properly brought to his attention. He was always devoted to the town's welfare, and when it would have been to his financial interest to locate elsewhere, he loyally remained in Bradford. The interest he took in Bradford was manifested in the immense outlay of money involved in buildings erected there by him. He caused to be built for his family and himself a magnificent home on Jackson Avenue, one of the finest residences in northern Pennsylvania. In addition to the Dresser plant, in the Sixth Ward, he erected a modern office building on Boylston Street, and in the rear of it, opening on Patent Place, an extensive warehouse.

He was twice married, his first wife being Miss Vesta E. Stimson, of Hilldale, Michigan, who died in 1883. His second wife, who survives him, was Miss Caroline Kirsch, of Lowell, Ohio. He is also survived by one daughter, Mrs. F. A. Miller, and three sons, R. A. Dresser, Carl Dresser, and Richard Dresser, all residents of Bradford, and one sister, Mrs. Abigail Burchard, of Chicago. Carl Dresser is a student of Princeton University, and Richard is attending Hill's School at Pottstown, Pennsylvania.

p. 6-11. Mid-Continent Fields. p. 6. Oklahoma. The Tillman County Oil, Gas and Development Company, of Frederick, Oklahoma, has been chartered. The capital is \$20,000, and the incorporators are Samuel Finley, J. M. Hamrick, and J. B. Curtis.

p. 8., Gasser at Wheeler. The Ardmore Gas Co. has completed its second test for gas, in the Wheeler development, 20 miles northwest of Ardmore, resulting in a 2,000,000 cfcpd gasser in the shallow sand. Four drilling rigs are maintained there, the Santa Fe Railway Company running three. The wells are drilled, shut in, and left standing without any attempt to put them to producing. This work has been ongoing on four years, and the only oil ever used was for drilling, but gas is used in the boilers. Ardmore consumes all the gas developed. It can hardly be called an oil field, even with four rigs running almost steadily for four years.

p. 8. Caddo Field. The Gas Line. The Arkansas Natural Gas Company has completed about 100 miles of its line from the Caddo Field to Little Rock, and expects to finish it some time in April, if the present good weather continues. The company has made all river crossings, and anticipates no trouble from Spring floods. The distance from Caddo to Little Rock is 180 miles.

p. 11. Oklahoma Tests. Outside of the main producing districts, three completions were reported, one south of the Canadian River, at Indianola, down at 2,803 feet, with no trace of sand; another southeast of Henryetta, showing a little gas at 1,150 feet; also the test at Stigler, southeast of Muskogee, showing nothing.

p. 14. Oklahoma Completions and Rigs, in Detail. (p. 11-14).

Miscellaneous. Six wells drilling, 3 rigs moved in.

Alva, Woods Co.,	Alva Deep Well Co. No. 1	3,500 feet
Indianola,	Preston & Co. No. 1	drilling
Lawton,	Local Co. No. 2, 5 miles south	drilling
Oklahoma City,	Local Co. No. 1	rig
Ponca City,	101 Ranch Oil Co. No. 2	drilling
Ryan, Jefferson Co.,	Ryan Oil Co. No. 2	drilling
Stigler,	Henry Oil Co. No. 2	rig
Woodville, Marshall Co.,	United Verde Oil Co. No. 1	drilling
Woodville, Marshall Co.,	United Verde Oil Co. No. 2	drilling

Vol. 9, No. 35, Feb. 9, 1911, p. 2. Trade Notes. (p. 2-3). The oil refinery at Vinita, Oklahoma, at the junction of the Frisco and the Katy Railroads, with a pipe line 26 miles long to the shallow sand field near Chelsea, is practically complete, and expects to receive crude and begin operations any day. John H. Millikin, the St. Louis capitalist, is backing the enterprise, and two young men, who were superintendent and storage foreman at the Chelsea refinery for two years, will operate the plant.

The Busch-Sulzer Bros. Diesel Engine Company, St. Louis, Mo., has been incorporated, with a capital of \$2,100,000 by August A. Busch, James R. Harrid, Charles D. Russell, and others. The American rights pertaining to the Diesel oil-burning engine, a German design, were purchased by Adolphus Busch, the St. Louis brewer, and it is the intention of the newly incorporated company to install a \$3,000,000 plant in St. Louis for the manufacture of the engine. The Gulf Pipe Line Company uses these engines at all its pumping stations on the Oklahoma-Texas trunk line.

p. 12. Wildcats. The Texarkana Oil and Gas Company, drilling twelve miles east of Texarkana, in Miller County, Arkansas, has reached the contract depth of 2,300 feet and is shut down. The well may be deepened.

The Nebraska parties drilling at Gurdon, Arkansas, are below 700 feet. The well is three-quarters of a mile from the depot, and is being drilled by Lee Wilson, well known in Gulf Coast and Caddo fields.

A local company is drilling a test at Marathon, Texas, about one mile east of a test drilled in the Spring of 1910. This test, located in the southeast corner of Section 46, Block 4, G. C. & S. F. R.R., was drilled to 960 feet, and the hole lost. Oil was found at 560 feet, but not enough to warrant a test, and another sand carrying oil was found, but the hole had been drilled crooked, and a bit was lost in it. In addition, a large volume of water was encountered, and while a small show of oil and gas was found at 960 feet, there was over 600 feet of water in the hole. It would be a very costly proposition to develop the Marathon Field, and then success would by no means be certain.

The Spider Oil Company, drilling near Mansfield, Louisiana, is down about 1,500 feet. This is the liveliest place for trading in lands in Texas or Louisiana, as hardly a day goes by without some leases being made. The Gulf Refining Co., Producers Oil Co., and the company now drilling, have extensive holdings. The Trees Oil Co. has leased a considerable acreage, S. P. Schenberger and others have 3,000 acres, and private individuals have leased about 15,000 acres of land in the Spider vicinity.

p. 23-24. New Incorporations. The Hot Springs, Arkansas, Gas Company has been capitalized for \$100,000 by William C. Fordyce, H. J. Lehman, and William A. Bextell.

The Braman Gas And Oil Company of Braman, Oklahoma, has been chartered for \$10,000. Incorporators, H. C. Scott, William Fox, and C. H. Lucas.

The Ionian Oil and Gas Company, of Vinita, Oklahoma, has been capitalized for \$5,000 by F. L. Kelley, M. G. Hawkins, J. B. McManus, and J. L. Martin.

The DeFord Oil Company, of Sapulpa, Oklahoma, has been incorporated for \$10,000. Incorporators, Rufus B. Thompson, C. A. Vaughn, and Frank P. Smith.

The Northwestern Oil Company, of Tulsa, Oklahoma, has been incorporated for \$50,000. Incorporators, Irene Hale, J. R. Woodard, and Grant Waggoner.

The Mary Tate Oil Company, of Sapulpa, Oklahoma, has been incorporated for \$10,000. Incorporators, Rufus B. Thompson, Eleanor A. Smith, and Frank P. Smith.

The Scully Oil and Gas Company, of Ardmore, Oklahoma, has been capitalized for \$200,000, by G. P. Cobb, A. C. Burwell, J. R. Dexter, F. L. Coffland, and William Hutchinson.

The Stonewall Oil, Mining and Development Company, of Knox City, Texas, has been incorporated for \$20,000. Incorporators, J. H. McLain, W. M. Sandifer, R. L. McLain, J. W. Kelley, and J. A. Copeland.

W. P. Davies, of Siloam Springs, northwestern Arkansas, owns a 1,000-acre orchard and is using crude oil as a preventative of frosts settling and damaging his trees. Last week, Mr. Davies visited Muskogee, Oklahoma, to procure crude petroleum for use this Spring, as the early season promises some danger. He has a patent burner in which the oil is placed, the heat radiating from these burners, warming the air to a temperature which absorbs the frost and saves the buds and blossoms. The experiment was tried last year for the first time, and was a success. The Stannard orchard in Franklin County, Kansas, east of Ottawa, is being equipped with the same or similar appliances. Two cisterns, lined with brick and cement, holding 8,000 gallons of crude oil each, have been constructed for a supply sufficient for each season. The oil will be pumped from the cisterns with a gasoline engine, into tank wagons, which will distribute the fluid to the 2,000 burners or heaters scattered through the orchard.

While each orchard consumes only a small quantity of crude oil, and its use is of very recent discovery, the plan has proved so uniformly successful that thousands of fruit growers in the frost zone (and even, the orange groves in Florida are not immune) will create a new demand for petroleum, and add to the stability and value of industry, for millions of dollars worth of fruit can thus be saved.

We can recall the use of kerosene in Texas 35 years ago to destroy the flies that deposited the eggs on cotton leaves and produced boll worms, a scourge almost as bad as the boll weevil. Shallow tin pans were placed in the cotton fields, filled with kerosene, and lighted. The flies worked at night, and like moths, were attracted by the lights, and killed. Spraying with paris green afterward appeared better than the early lights.

p. 4. Little Flights. (p. 2-4). By a vote of three to two, the Supreme Court of Oklahoma holds that the capital of the state is Oklahoma City, based upon the majority action of the state legislature in so legislating, in conformity to the provisions of the state constitution. Three of the judges held that the Enabling Act of Congress was binding only until its provisions were annulled by a majority of the qualified voters of the state or their qualified representatives in the legislature, and two dissenting justices maintaining that the Enabling Act was a covenant, binding the state to abide by its provisions until 1913. At any rate, Oklahoma City is now the capital of the state, where the legislature is in session, and all state departments are domiciled. Guthrie announces that an appeal will be taken to the Supreme Court of the United States, but it is doubtful if that tribunal will entertain the petition....of purely local interest.

p. 8. Personal Mention. (p. 6-10). Harry Sinclair, of Los Angeles, has organized the Hibernian Oil Company, in company with Charles Balaigh, C. H. Colby, George Sproule, W. H. Collum, of Sacramento, and S. H. Martin, of Sterling. They will develop a 40-acre lease from the Union Oil Co., on the Alvarado property in 15-32-23. Headquarters are at Bakersfield.

W. A. Forster, who was raised at Oil City, Pennsylvania, has located in Tulsa, Oklahoma. While Mr. Forster was raised in the oil country and has followed the business practically all his life, he is now devoting considerable time to agricultural lands. After leaving Illinois, where he was with the Tidewater Company, he went to Pine Bluff, Arkansas, where he was interested in timber lands, but found time to keep posted about wild-cattling in Arkansas.

p. 19. New Incorporations. The Guthrie (Oklahoma) Gas, Oil and Mining Company has been incorporated for \$25,000, by William Weinberger, T. J. Tearney, Frank Oldsmith, L. H. Matchett, and associates.

The Tillman County Oil, Gas and Development Company, of Frederick, Oklahoma, has been incorporated for \$20,000, by Samuel Finley, of Frederick, and J. M. Hamrick and J. S. Curtis, of Davidson.

The 1911 Oil and Gas Company of Durant, Oklahoma, has been capitalized for \$20,000, by J. B. Smith, N. L. Roberts, L. F. Lee, D. C. Phillips, and A. W. Cole.

The Oklahoma Natural Gas Company, of Sapulpa, Oklahoma, has been capitalized for \$25,000, by M. D. Downs, C. M. Noble, G. E. Shryock, W. H. Odell, S. S. Mendenhall, and C. W. Noble, all of Sapulpa.

The Longview, Texas, Gas and Oil Company has been incorporated for \$13,000, by J. C. Turner, Jr., J. H. Hurst, and E. A. Morgan.

p. 24. Arkansas Tests. John Galloway, of Jamestown, New York, is in the neighborhood of Pine Bluff, Arkansas, taking up oil and gas leases. The test well, about 15 miles south by east of Pine Bluff, is being worked on, and will be continued to a depth of 1,800 feet, in what is called the First Caddo Sand, looked for at about 1,600 feet, the Deep Caddo Sand supposed to be about 3,000 feet deep. So far as is known, there is nothing definite in favor of the Caddo Formations existing in eastern Arkansas, except the formations found in the test now drilling at Lester, North of Camden, where a showing of oil similar to the heavy oil of Caddo was found in a thin stratum. Mr. Galloway is reported to think well of the indications at Pine Bluff, and after completing his work at that point, will go to Caddo, Louisiana.

Vol. 9, No. 37, Feb. 23, 1911, p. 4. Trade Notes. (p. 4-6). James Gilchrist, managing director of Barclay, Curie and Company, at a recent dinner given to him in Glasgow, Scotland, made a statement to the effect that he believed that internal combustion engines for ocean going vessels will make large strides. His firm is now constructing a set of large internal combustion engines for a motor ship of 5,000 tons gross. Mr. Gilchrist believes that this type of engine, combined with the discovery and development of new oil fields, bids fair to becoming a serious competitor to steam propulsion and to supplant to some extent steam engines and boilers.

p. 8. Recent Deaths. (p. 6-8). J. J. Lapham died at his home in New York City on February 15, aged about 70 years. Mr. Lapham was associated with F. H. Rockwell, of Warren, Pennsylvania, for many years in the timber industry, which laid the foundation for the fortunes of both, and it seems a coincidence that both of them should have died within the week. Deceased was a heavy stockholder in The Texas Company, and had made several visits to the Oklahoma and Gulf coast properties of the company; his nephew, William Lapham, also being a stockholder and a director of the company. While he had never been active as a practical operator and producer, Mr. Lapham, like Mr. Rockwell, and in association with him, had profited from royalties in the Pennsylvania fields, and was not a novice in the petroleum industry.

Capt. John S. Gibson died at his home in Corsicana, Texas, Thursday, February 16, survived by the widow and three children, Elbert J. Gibson, of Dallas, and two daughters, Mrs. LeGrande Wood, of Sherman, and Miss Mary Gibson, Corsicana. Captain Gibson settled in Navarro County 54 years ago, and was always actively identified with the progress of the county and Corsicana, as a farmer, merchant, politician, and citizen. He profited by the petroleum development in Navarro County, beginning in 1896, as a leasor, and was also interested in production, and will be remembered by many operators who went there when the boom was on. It was the writer's pleasure to become acquainted with Captain Gibson in the early '80s, and to admire the sterling qualities that gave him a place of honor among the rugged pioneers of the Lone Star State. Peace be with him.

William C. Henry, for many years a prominent resident of Oildom, and former superintendent for the United Natural Gas Co., died very suddenly of heart disease at his home in Chittenango, New York, Sunday, Feb. 19. William C. Henry was born in Manchester, England, 70 years and 3 months ago. Mr. Henry, while still a youth, went to the oil fields of Venango County, Pennsylvania, and there he was engaged in various occupations, subsequently locating at Parker's Landing, where he was in charge of a loading rack for Parker, Thompson & Co., later on doing business as the Union Pipe Line, of which he became superintendent. In 1873, when the Union Pipe Line was absorbed by the Empire Line, he continued to serve the new company in the same capacity. In 1878, when the United Pipe Line took

over the property and business of the Empire Line, Mr. Henry was given a place with that corporation and served in various fields and capacities until he retired four years ago. He was then general superintendent of the United Natural Gas Co., with headquarters in Bradford for a long period. The United Natural Gas Co. was formed about 1879, to supply fuel to the United Pipe Lines pumping stations. Mr. Henry was widely known to oil men. He was congenial, affable, although quiet in his manner, a thinker and close observer. He understood the oil and gas business as an expert. He is survived by his second wife, one daughter, and three sons, Mrs. R. M. Jennings, of Pittsburgh, Pennsylvania; William E. Henry of Covina, California; Arthur B. Henry of Eldred, Pennsylvania; and Walter Henry, of Muskogee, Oklahoma.

Vol. 9, No. 38, March 2, 1911, Supplement Chart, before p. 1. Petroleum and Natural Gas - 1859 to 1911. The computations given in this very inclusive table, united to form as condensed and comprehensive a history of the petroleum industry as was ever prepared. For reference use, it is almost invaluable to the student of economics, the producer, the refiner, the marketer, the consumer, and the statistician, and represents an enormous amount of work and time and research, to cover no more paper than it does. It brings down to date the operations in oil from 1859 to the beginning of 1911 - a period of time covering nearly 52 years; and much of the statistical information therein contained is almost inaccessible to practically every citizen of the United States. The figures were compiled and arranged by W. M. Dunham, of Tulsa, Oklahoma, from the records and reports of the United States Geological Survey, the files of The Oil and Gas Journal, the Oil City Derrick, and other authentic sources, representing the work of years on the part of a few individuals. Mr. Dunham is the maker and possessor of the most complete and comprehensive line of oil and gas statistics in existence.

In this table will be found the total production of petroleum in the United States, in barrels of 42 gallons, from the year 1859 to January 1, 1911. Also, the daily average production and total values; the total number of wells drilled; the yearly average price per barrel for all grades of crude oil at the wells throughout the United States; the highest and lowest average yearly price at the wells in the Appalachian region; the total yearly increase and decrease, in quantity and value; the total stocks of the Appalachian grades of oil from the year 1869 to 1910 inclusive; the total stocks of the Trenton Rock grade from 1886 to 1910 inclusive; the price at New York for refined oils in bulk for export, from 1861 to 1910 inclusive; the total exports of petroleum and its refined products, with total values thereof from 1860 to 1910 inclusive. Also, the total value of the natural gas produced in the United States from 1882 (the year it became a commercial product of value), and the combined value of petroleum and natural gas.

Separate computations have been made, showing the number of wells that have been drilled, with the total number of dry holes in which neither oil nor gas was found, gross yearly production, daily average production per well, total number of wells in operation by years in the Appalachian, Lima-Indiana, Illinois, Mid-Continent, Gulf Coast, and California fields. The Appalachian Region includes the oil-producing areas of the states of New York, Pennsylvania, West Virginia, Southeastern Ohio, and Kentucky; the Lima-Indian Field includes the Trenton Rock Area in Northwestern Ohio and nearly all of Indiana, Illinois, and Western Indiana producing from another formation identical with Oklahoma; the Mid-Continent Region includes Kansas, Oklahoma, Northwestern Louisiana at Caddo, Central and Northern Texas at Corsicana and Petrolia; the Gulf Coast Region includes Southwestern Louisiana and Southeastern Texas, where heavy asphalt and fuel oil are produced. Caddo was included for the first time in the Mid-Continent computations by the United States Geological Survey in 1909.

California production figures, 1887 to 1910 inclusive, are taken from the records of the California State Mineralogical Bureau, San Francisco, with the total number of wells in operation each year and the daily average production per well as compiled by Dr. David T. Day, chief of the petroleum division of the United States Geological Survey. His method of arriving at the results shown in the tables is thus described: "The experience of petroleum producers in Pennsylvania

has shown that seven years is a fair average life of a well. Adopting this average for the Appalachian, Lima-Indiana, Illinois, and Mid-Continent Fields, allowing four years for the Gulf Coast Fields and six years for California wells, tables have been computed showing the probable number of active wells contributing to each year's production. This has been done by adding to the existing wells all the new productive wells drilled each year, and subtracting all wells reaching the prescribed age limit. From these tables, the daily average yield of the wells of each region has been estimated."

According to the figures of the United States Geological Survey, the total production of petroleum in the United States from 1859 to 1910, inclusive, reached the enormous amount of 2,369,150,942 barrels of 42 gallons, and was valued at \$2,059,309,458. The petroleum produced since 1902 exceeds in quantity all that was produced in the preceding 43 years, or from the birth of the industry in 1859 to 1902. The combined values of the petroleum and the natural gas produced during the year 1908 in the United States exceeded by \$61,736,630 the combined values of the gold and silver produced in the same area in the same period.

During the year 1909, there was exported from the United States, 1,483,857,164 gallons of petroleum and products, representing a money value of over \$100,000,000. This was over \$8,500,000 each month, \$2,000,000 each week, \$300,000 each day, and equaled \$12,000 every hour of each 24-hour day of the year, or \$2,000 a minute, or about \$3.40 every time the clocks ticked - which is going some for an industry that the Congress and President of the United States said could go to the dickens and help itself, sink or swim, on its own merits.

The United States Geological Survey gives the total production of the states of Colorado, Wyoming, Utah, Michigan, and Missouri, up to 1908, as 9,294,215 barrels, of which quantity Colorado produced practically all. Missouri never had a producing oil well, Michigan's production is not of commercial importance, Utah has never produced oil commercially, and Wyoming's production is very small commercially.

In 1909, a well was completed every 24 minutes in the United States.

The 1910 report of the Geological Survey has not yet been published, and on that basis, some of the figures in the table have been estimated, but only as to remote fields, that contribute very little to the totals. The Oil and Gas Journal keeps its own reporters in every principal field, and prepares and secures from first hands all the data that enter into annual statistical tables, except that natural gas data come from government reports, the Geological Survey estimating the natural gas value in 1909 at \$55,000,000 and \$57,000,000 in 1910, an increase of about \$2,000,000, the increase in 1909 over 1908 being only about \$300,000.

Mid-Continent

Year	Yearly Average Price per Bbl.	Total Wells Drilled *Est	Total Dry Holes	Daily Average Prod./Well	Total Prod. in Barrels	Total Wells Operating
1889	\$0.76	4	-	0.35	500	4
1890	0.77	8	2	0.34	1,200	10
1891	0.56	32	18	0.16	1,430	24
1892	0.51	-	-	0.24	5,080	24
1893	0.59	-	-	2.05	18,010	24
1894	0.71	50	16	1.89	40,130	58
1895	1.09	75	6	0.96	44,467	127
1896	0.96	137	78	1.79	115,141	176
1897	0.67	*10	5	2.43	147,648	167
1898	0.79	*12	4	9.65	616,600	175
1899	1.13	*15	5	10.93	738,183	185
1900	1.19	*30	10	14.70	917,225	171
1901	0.95	*50	20	20.54	989,696	132
1902	0.80	293	37	8.22	986,720	329
1903	0.94	1,290	264	3.19	1,573,085	1,350
1904	0.86	3,557	475	3.82	6,186,629	4,424
1905	0.62	4,043	546	4.34	12,533,777	7,911
1906	0.73	3,876	501	6.09	22,836,553	10,270
1907	0.72	4,720	392	8.81	46,846,267	14,568

1908	0.72	4,062	560	7.70	48,323,810	17,190
1909	0.70	4,114	545	7.15	49,804,922	19,067
1910	0.60	4,688	625	7.33	59,032,333	22,007

p. 1. Mid-Continent Production. 1909-1910. What seems to be the most phenomenal increase in production during the year 1910 is in the Mid-Continent fields, embracing Oklahoma, Kansas, Caddo in Northwestern Louisiana, Corsicana in Central Texas and Petrolia in northern Texas, the total production of which in 1909 was reported by the U.S. Geological Survey at 49,804,922 barrels and in 1910 at 59,032,333 barrels. Of this added production, Oklahoma furnished about 5,000,000 extra barrels and Caddo about 4,000,000 extra barrels in 1910. In 1910, Oklahoma and Kansas are credited with more than 49,000,000 barrels.

p. 2-12. The gasoline from natural gas industry. 1910 begins the practical era of making commercial gasoline from gas from producing oil wells. Frank P. Peterson, mechanical expert for the Bessemer Gas Engine Company, at Grove City, Pennsylvania, furnishes the Journal with a story of the industry. Douglas W. Franchot, the active manager for the D. W. Franchot & Co. Process and Appliances, also furnishes us with information. The U.S. Bureau of Mines also furnished data.

The gasoline from gas industry really had its inception in 1907, at Bradford, Pennsylvania, where Mr. Hollingshead made the first attempt, and is familiar with its early history. Wells in the Bradford Field were flowed with air pressure, but it was found that the air and salt water combined to produce an undesirable chemical reaction on the casing. To eliminate this feature, gas was substituted for air, but successful operations of the wells was interfered with by the quantities of gasoline generated by the high pressure. The elimination of this handicap in turn led to the installation of devices for the separate accumulation of the liquified gas, or gasoline. Dry gas is worthless; only casing-head gas from oil can be compressed and condensed, and gasoline distilled from it. In the Fall of 1909, a plant was installed at Bolivar, New York, and another at Maysville, Pennsylvania. The Bessemer Gas Engine people were more prominent in the early work, and in late 1910 the office force of that company organized the Penn Gasoline Company at Grove City, Pennsylvania. Since then, many companies have entered the market. About 70 plants have opened in the last 5 months of 1910, producing about 13,000 gallons per day, and netting 9 to 11 cents a gallon. In Oklahoma, nine plants are in operation, with three being constructed. About 3 to 4 gallons of gasoline is extracted from 1,000 cubic feet of gas in Oklahoma and Kansas, and the gasoline is about 86 degrees Baume.

p. 30. Trade Notes. The Union Oil Building Company, a \$1,000,000 organization, has just been incorporated, at Los Angeles, Calif., by Lyman Stewart, Robert Watchorn, Edwin T. Earl, and E.R.W. Frost, for the purpose of erecting a modern, fireproof, 11-story and basement office building, to be known as the Union Oil Building. It will have a frontage of 100 feet on Spring Street, by 155 feet on Seventh, and it is to be ready for occupancy soon after Jan. 1, 1912. The Union Oil Company and its subsidiary companies will occupy several of the office floors, and several other oil concerns are figuring on space.

p. 36. Oklahoma 1910 Operations. In 1910 in Oklahoma, 3,882 wells were completed, with 423 dry and 174 gas, with new production amounting to 232,888 barrels of oil. Oklahoma and Kansas were producing about 125,000 barrels a day, with Kansas about 3,000 barrels a day. Pipe lines were paying 30 to 44 cents a barrel.

Vol. 9, No. 39, March 9, 1911, p. 6. Oklahoma Fields. February. A Southern Gasser. Another gas well has been drilled in the Wheeler Field in Carter County, near Ardmore, and not far from the Texas line. Reports vary as to the size of the well, ranging from 4,000,000 to 15,000,000 cfm, with the first figure probably the nearest. It is to the south of the pool first developed in Section 21-2S-3W, and will likely lead to some testing in that direction, both for oil and gas. The producing formation at Wheeler is about 1,200 feet deep, with shallower showings. The Santa Fe Railroad has been practically the only operator in the field, but the gas well just drilled is owned by W. A. Ledbetter and associates, and will be turned into the Ardmore gas line.

p. 10. Oklahoma. Miscellaneous Completions.

Wheeler, Carter Co., Ordware Gas Co. No. 1 gas

p. 12. Oklahoma. Wells Drilling. Miscellaneous.

9-10-18, Inola, Beatty & Co. No. 3 drilling
 27-10-9, Weleetka, Northern Oil Co. No. 1 drilling
 Alva, Woods Co., Alva Oil Co. No. 1 3,500 feet
 Guthrie, Local Co. No. 1 rig up
 Lawton, 5 mi. south, Local Co. No. 2 drilling
 Oklahoma City, Local Co. No. 1 rig up
 Ponca City, 101 Ranch Oil Co. No. 2 drilling
 Ryan, Jefferson Co., Ryan Oil Co. No. 2 drilling
 Stigler, Henry Gas Co. No. 2 rig up
 Woodville, Marshall Co., United Verde Oil Co., No. 1 drilling

p. 22-23. New Incorporations. The Humble (Texas) Oil Company has been incorporated for \$150,000, by S. K. Warrenner, G. S. Wood, and M. C. Hale.

The United States Oil and Gas Company, of Tulsa, Oklahoma, has been incorporated for \$25,000, by D. and S. Ratrinovitz and C. W. Grimes.

The White Rock Oil Company, of Dallas, Texas, has been incorporated for \$25,000, and has been commenced drilling for oil in the White Rock District.

The Surprise Oil Company, of Tulsa, Oklahoma, has been incorporated for \$9,000, by P. J. and Thomas White of Tulsa, and W. T. Sinclair, of Independence, Kansas.

The Collinsville (Oklahoma) Industrial Company has been incorporated for \$10,000, by J. D. and Sadie Ward, A. R. Ralston and associates. The company will drill for oil.

The One Hundred and One Ranch Oil and Gas Company, of Phoenix, Arizona, has been incorporated for \$1,000,000, by C. M. Stoddard and E. K. Eyer, of Phoenix. G. A. Paul, of Oklahoma City, will act as state agent.

The Finance Oil Company, of Salamanca, New York, with \$2,000,000 capital stock, and the Savoy Oil Company, of New Jersey, with \$5,000,000 capital stock, have both been granted permission to operate in Oklahoma, with headquarters at Tulsa.

Vol. 9, No. 40, March 16, 1911, p. 1. An Oklahoma Promotion. Governor Cruce, of Oklahoma, is respectfully offered as a reference by promoters of the Petroleum Development Company, Ardmore, Oklahoma, and if he warrants their reliability and integrity as represented by their half-page advertisement in The Oklahoman, the governor has something to answer for. In its assault on fake promotions, the Post-office Department has endeavored to make it plain that misrepresentation in advertising is the first step in the crime. This advertisement has in bold type the headline: "A possibility of securing \$750 per day from \$100 well invested." That statement is absolutely and unqualifiedly misleading. The proposition, which really embraces all the features of a lottery, is thus naively put:

"Hon. W. A. Ledbetter, the famous Oklahoma City lawyer, and P. C. Dings, president of the Guaranty State Bank, of Ardmore, Oklahoma, are joint owners of a fifteen million foot gas well, which was brought in March 1, 1911, in the Wheeler-Santa Fe Oil Field, eighteen miles west of Ardmore, and they have a contract for this enormous amount of gas at five cents per thousand cubic feet, which makes

this well worth to them \$750 per day.

Our proposition - We have platted 320 acres in the section adjoining the one in which this big well was brought in, dividing it into tracts of 9,610 square feet, which tracts we offer at the remarkably low price of \$100 each, on monthly payments of \$10. No interest. No taxes. Ten percent discount allowed for cash.

With each tract, we issue 75 shares of stock in an organized oil company, fully paid and non-assessable, which company will commence development work on this 320 acres as soon as a reasonable number of these tracts are disposed of. We have deposited a bond with the Guaranty State Bank of Ardmore, guaranteeing that we will turn over to this oil company the sum of \$5,000, to be used for free development work on this land. Every owner of a tract will have a voice in the selection of the sites on which this free drilling will be done. Your tract may be one of those selected, in which event you will get a free well."

Just imagine the pleasure of owning 9,610 square feet of property adjoining this big well. It would be just ten feet more than a town-lot 80 by 120.

When the lottery is held, the federal officials should be called in to see that it is conducted on the square. The one and only chance they have to make good on the headline of their advertisement lies in the possibility that some purchaser of a lot would get a free well which would produce 15,000,000 feet of gas per day, marketable at five cents per thousand.

When the contractor is called in to drill this free well, he will take the entire \$5,000 and then will not have enough to finish the job. In reality, if the proposition could be carried out as planned, and the promoters would make every effort to comply with their promises so elaborately set out, the \$5,000 which they guarantee to use for development work would hardly be sufficient for the drilling of one well. Hence, one purchaser only would have any chance at a free well, and he would be in danger of arrest for taking part in a lottery.

The possibility of an oil producer that would pay dividends on the investment is so remote that it need hardly be considered. The statement that the gas well described in the advertisement is good for 15,000,000 feet daily is also subject to proof. Conservative estimates have placed it at 5,000,000.

The wonder is that prominent men will allow themselves to be touted as sponsors for such promoters, and that newspapers will print such advertisements.

p. 1. Gasoline from Gas Queries. To the Editor: I am satisfied that I built the first gasoline plant on the high pressure, two stage plan, on the Cook Oil Lease, at Mayburg, Pennsylvania, in 1906, and since that time this plant has averaged 350 gallons per day of 86-94° gravity gasoline.

William Richards, Mayburg, Pennsylvania, March 7, 1911.

p. 4. Personal Mention. W. G. Skelly, of Robinson, Ill., was a caller at The Journal office during the week. W. G. started from Oil City, Pennsylvania, eight years ago, to look after some gas interests for the late T. B. Simpson, in the Indiana Field, and soon got to the point where he had to devote all his time looking after his own oil interests. The firm of Selby, Cisler & Skelly has had some fine production in the Illinois Field, and "Bill" is now preparing to branch out in the westerly direction.

p. 4. Recent Deaths. William P. Howe, assistant treasurer of the Standard Oil Company of New Jersey, died suddenly March 13, 1911, in the offices of the company in New York. He was 50 years of age, and had been employed by the Standard since boyhood. The widow and one daughter survive.

p. 4. Letters to the Journal. Tom Wall, president of the Poteau Light and Ice Company, Poteau, Oklahoma, writes entertainingly of developments in the southeastern corner of the state. His letter follows: Gentlemen: Very little was done since the bringing in of the gasser east of Poteau last July, until the past 90 days. W. R. Hamilton, formerly of Dewey, has been drilling about 4 miles

southwest of the Coronal Oil and Gas Company well (east of Poteau), but owing to crooked hole, has not made much headway. A small quantity of gas was secured, but the well is not deep enough to be a good test as yet. Some Kansas City parties have been drilling eight miles south of the Hamilton operations, but without success. Mr. Goldman, from Bartlesville, has secured quite an acreage in the north part of the country (LeFlore), and is now drilling.

The Poteau Light and Ice Company is now drilling three locations west of north from the Coronal Oil and Gas Company well, while the Coronal people are erecting a rig one location north of their present well.

Oil is the particular thing sought for, but if not, gas is assured, which is needed to further establish this section as a gas field.

p. 14-15. New Incorporations. The Big Pond Oil Company, of Sapulpa, Oklahoma, has been incorporated for \$10,000, by H. C. Miller, B. C. Burnett, and B. G. Bennett.

The Battle Oil Company, of Tulsa, capital \$100,000. Incorporators, C. E. Strouvelle, F. O. Jackson, and C. C. Myers, all of Tulsa.

The Co-Operative Oil and Gas Company, of Bartlesville, Oklahoma, has been incorporated for \$100,000, by A. Sorenz, S. A. Rowland, and S. C. Fox.

The Atoka, Oklahoma, Oil and Gas Development Company has been incorporated for \$20,000, by A. R. Fendress, L. R. Tenbuer, and associates.

The System Oil Company, of Tulsa, Oklahoma, has been incorporated for \$40,000, by P. J. White, of Tulsa, and E. W. and H. F. Sinclair, of Independence, Kansas.

The Seventeen Oil Company, of Muskogee, Oklahoma, has been incorporated for \$2,000, by Carl W. Gust and Robert H. Searcy of Eufaula, and James M. Anthis, of Muskogee.

The Eastern Oklahoma Oil Company, of Bartlesville, Oklahoma, has been incorporated for \$50,000, by G. A. Dixon, president; E. V. Jeager, vice-president; and Frederick Spraul, secretary-treasurer.

Vol. 9, No. 41, March 23, 1911, p. 4. Recent Deaths. The Late Hon. John Fertig (with portrait). Hon John Fertig, one of the best known of oil men and capitalists of western Pennsylvania, died March 19, at the Hotel DuNuys, Los Angeles, California, after an illness of about two weeks. He was one of the last four men who were engaged in the oil business continuously since 1860. The deceased was born March 17, 1837, in Venango county, Pennsylvania. In the Spring of 1859, he set out for the new oil discovery on Oil Creek, where Captain Frank Funk was then drilling on the Upper McElhenny Farm, and what was to be the first Third-Sand well of history. Mr. Fertig secured a lease, with others, from Captain Funk, and "kicked" a well down to a depth of 200 feet, and finding no oil at that point, abandoned his venture. He hired out with others to "kick" on other wells, but finding the contractor was making \$5 out of every dollar he paid to Fertig, the young man quit day work, and secured a string of tools, and started in as a contractor at Walnut Bend. When Captain Funk drilled down to the Third Sand, Mr. Fertig returned to his first venture, drilled it to the same formation as the Funk well, and developed on July 1, 1861, the famous Fountain Well No. 2, which flowed at the rate of 500 barrels per day, the second flowing well ever struck. At this time, the afterwards widely known firm of Fertig & Hammond was formed, with Mr. Hammond purchasing an interest in the lease and well. The two men inaugurated an active campaign in the production of petroleum, and soon became known as the heaviest operators of the period. Their activities covered large scopes of territory in Clarion, Butler, Venango, Warren, and McKean Counties, and during 17 years of their association, completed over 500 wells.

In addition to their extensive producing interests, they, in 1871, organized the Foxburg and St. Petersburg Savings Banks, of which Mr. Hammond was president, and Mr. Fertig vice-president, and also built and operated a refinery at Erie, Pennsylvania, in 1863-64. Upon the death of Mr. Hammond in 1879, the firm of Fertig & Hammond passed into the history of the trade. Mr. Fertig then organized the firm of John Fertig & Co., and commenced vigorous operations in McKean

and Warren Counties. It was this firm that took up the famous Tiona Territory, which they developed in conjunction with John L. McKinney & Co., drilling in the neighborhood of 100 wells, with the most successful results. They disposed of their interests to John L. McKinney & Co., leaving the field with a handsome fortune. This company also operated quite largely in the Cogley Pool, Clarion County. Perhaps the most extensive and far-reaching of Mr. Fertig's operations date from the organization of the National Oil Company. He was the leading spirit in its formation, and the executive head in successfully directing its affairs. The primary object of this company was to produce pipe, and refine petroleum, and deliver the refined product to the principal markets of the country by a system wholly under its control - from the wells to the lamp. The scene of their producing operations lay in the Grand Valley and Pleasantville Fields, where they drilled an aggregate of between 300 and 400 wells. They constructed a system of gathering lines in the field, and extended a main line to Titusville, where they erected a refinery of 1,000 barrels capacity daily. They had distributing stations at St. Paul, Minnesota, and other western points, at Troy, New York; Providence, Rhode Island, and other eastern points, to which they transported their refined oil by their own tank car system.

He is survived by the widow, and the following children: Samuel and Roscoe, of Titusville; John H. and Willis E., of New York City; and Harry, of Bartlesville, Oklahoma; and one daughter, Mrs. Marian Wells, of Titusville. Also by five brothers and two sisters, Frank Fertig, of Robinson, Ill., a large operator in the Illinois Field; Samuel Fertig, also a large operator in the Southwest; Charles Fertig of Fertig, Venango County, Pennsylvania; Joseph Fertig, Hydetown; Peter Fertig, Lewisburg, Kansas; Manuel Fertig, Titusville; Mrs. S. S. Henne and Mrs. M. W. Quick, Titusville; and Mrs. Jane Hess, Greenville, Ohio.

p. 10. Wildcat Notes. W. G. Clouston, of Lakeport, Arkansas, states that he has a fair showing of oil in his test about 20 miles south of Greenville, Mississippi, on the Arkansas side.

p. 18-19. New Incorporations. The Bull Dog Oil Company, of Tulsa, Oklahoma, has been incorporated for \$30,000, by Ray M. and C. L. Collins, and R. S. Sherman.

The Tom Moore Oil Company, of Tulsa, Oklahoma, has been incorporated, with \$10,000, by A. B. Reese, M. W. Kelly, and P. J. Hurley.

The Elmer Oil and Development Company, of Altus, Oklahoma, has been incorporated for \$35,000, by J. G. Bickley, J. L. Crump, and Everett Petry.

The Colonial Petroleum Company, of Bartlesville, Oklahoma, has been incorporated for \$50,000, by Pearl Beyerly, J. D. Talbott, and A. M. Tate.

The New York Central Oil Company, of Tulsa, Oklahoma, has been incorporated for \$300,000, by D. C. Acosta, J. R. Hill, and J. H. Rickabaugh.

The Talihina, Oklahoma, Oil and Gas Company has been incorporated for \$15,000 by John J. Thomas, E. A. McCowan, J. W. Alexander, and J. N. Ross.

The Cunningham Drilling Company, of Tulsa, Oklahoma, has been incorporated for \$4,000, by W. H. Cunningham, of Beaumont, Texas, and Seth Ely and W. E. Parker, of Tulsa.

The Roxanna Oil and Gas Company, of Roff, Oklahoma, has been incorporated for \$30,000, by H. B. Buterbaugh and J. D. Brownlee, Jr., of Indiana, Pennsylvania, and Paul H. McHenry, of Dewey, Oklahoma.

The Poteau Valley Oil and Gas Company, of Poteau, Oklahoma, has been incorporated for \$5,000, by George B. Noble, G. A. Morrison, J. W. Hale, J. F. Miller, and R. L. Taylor, of Poteau, and J. R. Logan and M. L. Harris, of Wister, Oklahoma.

p. 24. Have a look into a well. Professor J. H. Rosing, who holds the chair of physics in the Nicholas I Institute of Technology, at St. Petersburg, Russia, has invented an instrument, in connection with the recently discovered cathode rays, by means of which it is possible to see objects deep down in the earth, under the water, or in any other place where it has previously been impossible for the human sight to penetrate.

In Professor Rosing's description of his invention, he says that it is an electric telescope, and consists of two sections or stations connected by electric wires. In the ordinary telescope, there is but one active station, the receiver or great lens, which draws the object to be studied near, by its power of magnification. In the electric telescope, which operates between any two points to which the sending end can be dispatched, the picture as seen at the transmitting end is made visible at the receiving station. All that crosses the field of vision at the sending station must be transferred to the receiving station, and reproduced there. In order to do this, pictures are sent at the rate of not less than forty per second, and these are reproduced at the receiving end of the wire.

The great problem before the inventor was to devise apparatus which would get all of the pictures within the range of vision, and transfer them over the wires from the sending to the receiving station. In order to do this, Professor Rosing placed at the sending station a device by which the sensitive screen was made to revolve over the entire field of vision in one second. He has succeeded by dividing the whole picture into reflected sections of light, which are transformed into electricity and transmitted to the receiving station. Upon arrival, a specially designed apparatus receives the impulses, reverses operation of the sending station, and reflects upon a screen, or upon the eye of the observer, the exact picture of whatever crossed the field of vision at the sending station. Everything depends upon the transmission of its oscillations of the lighted field of vision, with all its variations, from the brightest light to the deepest shadow, and this must be done in a fraction of time, sometimes a millionth of a second. This difficulty has prevented the success of previous attempts. It is impossible with simple mechanical aids, like mirrors. It was necessary to secure some agent that would be affected at once by the variations in the luminous field and by electric currents.

The professor knew by experiment, that besides ordinary light rays, there are others, which, while possessing all the characteristics of luminous rays, are affected by oscillating motions, under the influence of some external electric or magnetic force. These are the cathode rays, which are produced in a vacuum almost as quickly as light, and which, when projected upon the body, create an intensely bright light at the receiving station. The cathode ray is easily influenced by the slightest oscillation of the electric current. When we add to the rotation, mirrors, at the sending stations, which form the moving portion of the optic system in this apparatus, some small dynamos, and guide the currents at the receiving station by electro-magnets placed near a Crookes tube (in which cathode rays are generated), these currents make the cathode rays oscillate in absolute correspondence with the movement of the optic axis at the sending station. The cathode rays project themselves on the fluorescent screen placed in the same Crookes tube. They cause a fluorescence at the point of incidence, and trace a luminous zigzag line, corresponding to that which the receiving eye makes in the field of vision which it follows. The rapidity of this movement causes the separate zigzags of this line to blur into a single luminous square in the eye.

Now, in order to produce in the square, some image corresponding to the field of vision, it is necessary that the cathode rays shall only fall on the screen at the moment when the receiver meets a luminous point on the visual field. At other times, the rays must be masked. The photoelectric apparatus at the transmitter accomplishes this. The cathode rays remain ordinarily hidden behind the diaphragm placed in its way, and it is only at the moment when the light is thrown on the photoelectric apparatus, that the electric current which emanates from it at the receiving point, begins to exert its effect on the rays, and forces them to pass through the diaphragm, and impress themselves on the screen.

Should the above invention be worked out to a practical basis, where it can be used for commercial purposes, it will be one of the greatest for oil wells. When tools or any other part of the drilling apparatus, or casing, or for that matter, any obstruction whatever in the bottom of a well impedes the progress of

drilling, the best that can be done under present conditions is to make an impression of the obstruction, or guess at its whereabouts by "feeling" with fishing or drilling tools. In all probability, with the aid of such an instrument as the new invention, which could be carried to the bottom of the well and an actual photograph made of the obstruction, many holes which now have to be abandoned because of the obstruction, may be saved. - Petroleum Review. London.

Vol. 9, No. 42, March 30, 1911, Trade Notes. (p. 2-3). The Buick Oil Company, with offices in Los Angeles, has reduced the number of directors to three, electing D. D. Buick, formerly well known as a manufacturer of automobiles, president.

E. I. DuPont de Nemours Powder Company had total assets of \$109,227 in 1810 and \$81,099,908 in 1910. It is one of the best known manufacturers of glycerin in the oil country, and has representatives in almost all the producing districts.

Will H. Whaley, of the Oklahoma Map Company, Muskogee, has decided to form a stock company on a basis of \$50,000. There is a good demand for up-to-date maps of the oil country.

p. 6-8, 10. Gasoline from Natural Gas, by Thomas M. Galey. History, In Scotland in 1875, a scientist J. J. Coleman, constructed the first apparatus for the continuous large scale liquification of the volatile gases generated from the distillation of bituminous shale. The Chemical News, Feb. 28, 1879, Vol. 39, p. 87, contains a description of the process. It is nearly identical with the present practice in modern gasoline plants.

Chemical Considerations. The Germans are ahead of other nations in studying the chemical structure of the hydrocarbons. A hydrocarbon is composed of hydrogen and carbon only. A saturated hydrocarbon is one that cannot take up any more hydrogen. The various combinations have been doped out during the past 150 years. Three series concern petroleum geologists: paraffins (C_nH_{2n+2}), olefins (C_nH_{2n}), and acetylenes (C_nH_{2n-2}), with paraffins being the most important. Olefins are unsaturated compounds. Acetylenes are usually oily liquids and unsaturated. The paraffins are formed by the decomposition of animal and vegetable matter in a relatively low temperature in the absence of oxygen, and form the main constituents of crude oil:

Names	Formula	Melting Point-F°	Boiling Point (F° at 150 A.	Commercial Name and Gravity in Baume Deg. with approximate boiling point ranges
Hydrogen	H		-475	"Dry" Natural Gas
Methane	C H ₄	-300°	-243	
Ethane	C ₂ H ₆	-277°	-119	Denser Natural Gas
Propane	C ₃ H ₈		- 49	
Butane	C ₄ H ₁₀		-33.8	Cymogene (108°)
Pentane	C ₅ H ₁₂		+100	
Hexane	C ₆ H ₁₄		+159	Rhigolene (93°)
Heptane	C ₇ H ₁₆		+208	
Octane	C ₈ H ₁₈		+257	Petroleum Ether (Gasoline)
Nonane	C ₉ H ₂₀	-59.8°	+301	
Decane	C ₁₀ H ₂₂	-25.6°	+343	C. Naptha B. Naptha A. Naptha Benzin Kerosene

Natural Gasoline } 105°
73°

94°
86°

68°
58°

Paraffins are also obtained by dissolving carbides of the metals in acids, hence the inorganic theory of petroleum genesis. Petroleum in general contains about 85% carbon and 13% hydrogen, with a small percentage of oxygen, a trace of nitrogen, and a small percentage of sulphur. Methane, to liquify, requires 2,100 pounds per square inch pressure at 32° F, and becomes solid at 300°F below zero.

Gasoline is a meaningless term, and is commonly used to cover all the lighter fractions of petroleum and the denser liquified portions of natural gas.

p. 16. Wildcat Notes. A company is being formed at Booneville, Arkansas, to drill for oil and gas in that vicinity.

The Pine Bluff, Arkansas, Natural Gas Company, recently incorporated for \$100,000, a branch organization of the Arkansas Natural Gas Company proposes to furnish Pine Bluff and vicinity with natural gas. A pipe line is already under way to the Caddo Field, and it is thought probable that the service may be extended to several other Arkansas cities. A. B. Dally is president; W. P. Dally, vice-president; and W. B. Smith, secretary-treasurer.

p. 22. New Incorporations. The Oklahoma Oil and Burner Company has been incorporated for \$10,000, by A. Morrison, H. A. Bump, Mr. Malone, and H. A. Hodges, of Oklahoma City, and J. T. Beam, of Harrah.

The Creek Refining Company, of Okmulgee, Oklahoma, has increased its capital stock from \$40,000 to \$75,000. The incorporators are: E. E. Andrews, John A. Helford, O. E. Filley, E. W. Gill, Mr. Tyst, and C. S. ? - ley .

Vol. 9, No. 43, Apr. 6, 1911, p. 2. Trade Notes. The Edwards Oil Company, of Oklahoma City, has unloaded three cars of machinery at Byers, Clay County, Texas, and will begin the drilling of three wells east of the town.

Colonel Frank G. Prouty, who published the first paper at Guthrie at the opening of the territory of Oklahoma, is getting up a special oil and gas booster edition of the Ardmoreite, published at Ardmore, Oklahoma, which is to appear some time in April.

E. C. Ryan has purchased the controlling interest in the Southern Oil Company from George B. Watson, of Parkersburg, West Virginia. Mr. Ryan will reorganize the company and move its headquarters from Nowata to Bartlesville.

L. G. Denning, general counsel for the Ohio Fuel Supply Company, will leave this week for Texas, to attend the annual meeting of the Lone Star Natural Gas Company. The company was organized about two years ago, by the interests which control the Ohio Fuel Supply Company, and is developing a gas supply in Texas and also supplying a number of Texas towns. Mr. Denning will attend the meeting as a representative of the Ohio and Pennsylvania stockholders of the company.

p. 19. Well-Drilling Lore. United States Geological Survey Report on Methods of Drilling. The deepest well in the United States is near West Elizabeth, Pennsylvania. Its bottom is 5,575 feet deep. The deepest well in the world is in Germany, and is 6,572 feet deep. A more remarkable well, perhaps reaching a depth of 3,600 feet, was drilled for petroleum in western China by primitive methods, with a cable of twisted strands of rattan. The book is: "Well Drilling Methods" by Isaiah Bowman, U.S.G.S., Water-Supply Paper 257. He mentions that in fishing for tools, a small camera can be lowered to the bottom of the hole and a picture taken, using electricity.

Vol. 9, No. 44, Apr. 13, 1911, p. 3. Trade Notes. (p. 3-4). Dr. Diesel, the inventor of an oil engine, is the authority for the statement that fully 250 ships, naval and commercial, are now fitted or are being fitted with oil engines. If the 9,000-ton cargo ship now being constructed in Hamburg proves a success, Dr. Diesel said there would be a general tendency toward the adoption of oil as a motive power for all kinds of vessels, including warships.

The Petroleum World, London, is authority for the statement that the Royal Dutch-Shell Combine has decided to establish an office at San Francisco. The management will be intrusted to a member of the London staff of the Asiatic Petroleum Company, one of the Royal Dutch-shell Combine's subsidiaries, in which the Paris Rothschilds are also interested.

p. 4. The Bartlesville Machine Company is a new organization that will take over the old foundry built several years ago, and make it a modern oil-field machine shop. H. G. Durnell, who has been western manager for the Bessemer Gas Engine Company for several years, will be manager of the new company, associated with George C. Priestley, J. J. Shea, L. A. Rowland, George B. Keeler, and William Johnstone, all Bartlesville citizens and oil operators. The capital stock of

the new company is \$60,000.

p. 6. Personal Mention. (p. 4, 6). George C. Priestley, vice-president of the Central Fuel Oil company, is in New York and the East for several weeks. Mr. Priestley tendered his resignation as vice-president and resident manager of the company in January last, but it has not yet been acted upon.

p. 16. Texas-Louisiana Wildcats. The test at Gurdon, Arkansas, has not yet been completed. Lee Wilson, who drilled the hole to 1,200 feet, is again drilling in the Caddo Field.

C. F. Miles and associates are drilling near Longview, Texas, the hole being below 1,800 feet at the last report.

The Texarkana Oil and Gas Company drilled into salt water in its test in Miller County, Arkansas, at a depth of 2,760 feet.

The Caddo Gas and Oil Company is drilling another test near Lester, Ouachita County, Arkansas.

p. 26. Gas Notes. The Choctaw Gas, Light, Heat, and Power company held its annual stock holders' meeting at the office of the Title Guaranty Trust Company at St. Louis, Tuesday, and re-elected the following officers and directors: G. Weimer, president; R. L. Ri----, treasurer; W. W. Newberry, secretary. Mr. Weimer resides at McAlester, Oklahoma, where the company operates a gas plant. The other officers are from Louisiana.

Vol. 9, No. 45, Apr. 20, 1911, p. 2. Trade Notes. Findlay, Ohio, parties are reported to have leased 28,000 acres of land in the rice districts of Arkansas, and will begin operations for oil soon. Of this amount, 5,000 acres can be held for five years before drilling must start, but on the remainder, compulsory drilling clauses will necessitate early operations.

D. W. Franchot & Co. shipped the first tank car of natural gasoline from their plant at Kiefer last week, with satisfactory result.

p. 4. Personal Mention. W. G. Skelly, a well-known operator in the Sandoval Pool, is interested in the Carlyle boom, and has his eye open for anything that looks like a lease. He made the trip into St. Louis last Sunday. Mr. Skelly has been in the oil game for years, having picked up a bunch of stuff in and around Marion, Indiana, and staying with the game there until the Illinois fields opened up. He is associated with "Doc." Cisler and Frank Selby in the Sandoval Field. Mr. Skelly was one of the lucky operators in the Oklahoma pools and is making good at Sandoval.

Look who's coming. Governor Cruce, of Oklahoma, has selected Charles J. Wrightsman, the well-known attorney, and Jesse I. Gillespie, oil producer, investor, and representative in the legislature, both of Tulsa, to be members of his personal staff and political advisers, Mr. Wrightsman taking the rank of lieutenant colonel and Mr. Gillespie colonel, Oklahoma National Guard. Roy Stafford, owner of The Daily Oklahoman, Oklahoma City, is the commanding officer.

p. 16. Mid-Continent Fields. Oklahoma. One of the latest completions in the east part of the Cherokee county is a well drilled north of Poteau, in LeFlore County, by Dr. Rood and associates, of Bartlesville. This well is reported a showing for 4,000,000 cf gpd and more tests are being started. It is to be a southwest extension in Oklahoma of the Fort Smith Gas Field of Arkansas.

Bartlesville people have been leasing for some time in Pittsburg County, west and southwest of McAlester, and some wells are about to be drilled in the southwest corner of Pittsburg County, not far from Stuart, a station on the Rock Island Railroad west of McAlester. Several tests have been drilled in that vicinity.

p. 18. Wildcat Notes. It is reported that the Aquilla Oil and Gas Company has secured 88 acres of land near the town of that name, 20 miles northwest of

Waco, in Hill County, Texas, and has divided the land into 4,300 lots, 1,500 of which have been sold from \$10 to \$50 each. The company has reserved a strip about 60 feet wide running east and west through the 88 acres and will drill a well. If the company sells many more lots at the same figures, it will beat drilling producing wells.

p. 18. North Texas Well. Reports have been coming from Electra, a town in the Western part of Wichita County, Texas, of a good well in Wilbarger County, near Electra. It was reported as good for 400 barrels a day, the oil being of high grade. A letter was received in Tulsa this week from there, that the well is making 300 barrels, the oil being 43 degrees gravity, and shipped to the John Sealy & Company Refinery at Corsicana, Texas. This information appears to be reliable, and the capacity of the well actual, because the output is being regularly shipped and gauged. The Clayco Oil and Pipe Line Company is presumed to be the owner. The John Sealy & Company controls the Clayco Oil and Pipe Line Company, organized to operate in the Clay County Field and other North Texas fields. The petroliia or Henrietta Field is in the northeastern part of Clay County, on Red River, and the Wilbarger County well is almost due west, across Clay and Wichita Counties, about 60 miles from Petroliia, and about 20 miles south of Red River and the Oklahoma state line.

Several wells have been drilled in the Electra District that made fair showings, but it is a rather remote section of country, little frequented by leasers and operators, and very little is really known about them. The Clay County Field has been exploited for nearly ten years, but has developed only a little oil, and considerable gas, in a limited area, at depths ranging from 200 to 1,700 feet. It is the understanding that the Wilbarger County well is about 1,800 feet deep.

p. 18. Some Field Notes. The police jury of Shreveport granted an election to the anti-prohibitionists, to be held June 1, 1911. The town has been dry for several years, and the friends of liquor, claiming that prohibition has failed to work, prepared a petition with the above result. The saloons are to be regulated if the antis win, and liquor will be sold July 1 in that case. It is a parish election, and will affect the towns of Vivian, Oil city, and Mooringsport, headquarters for oil field workers.

Vol. 9, No. 46, Apr. 27, 1911, p. 2. Trade Notes. A telegram received at Canadian Pacific Railway headquarters at Toronto, states that the steamship Princess May has just completed one round trip from Vancouver to Skagway, with oil as fuel, and the results were very satisfactory.

The Talihina Oil and Gas Company has been organized at Talihina, Oklahoma, with a paid-up capital of \$15,000. A well is to be started a short distance from the city. The officers are: John J. Thomas, president; J. M. Ross, secretary-treasurer; and E. A. McGowan, vice-president.

The Exchange National Bank and the Union Trust Company, of Tulsa, Oklahoma, have been consolidated, and the new institution will be known as the Exchange National Bank, with a capital of \$200,000 and deposits running over \$1,000,000. The new officers of the institution are P. J. White, president; H. F. Sinclair, vice-president; D. F. Connolly, vice-president; O. H. Leonard, vice-president; M. Hughes, cashier; A. T. Alison, assistant cashier. Most of the officers have been connected with the oil business for years, Mr. White, the president, having been western manager of the Oil Well Supply Company before entering the banking business. D. F. Connolly is with The Texas Company, while Mr. Sinclair has been a heavy producer.

p. 2. Personal Mention. (p. 2-4). It is reported at Bartlesville, that George c. Priestley, who engineered the Central Fuel Oil Company deal, and who has been connected with the company since it acquired its Mid-Continent properties, has severed his connection as general manager of the concern, along with Harvey Barnes.

p. 3. Mrs. G. W. Garrison, of Oklahoma City, was a visitor at The Journal office last Saturday. She has just organized the Garrison-Hammond Oil Company, an Oklahoma corporation, and has 1,600 acres of undeveloped land near Duncan, Oklahoma. The Hammond people are connected with the Wall Investment Company, of Tampa, Florida, and were given a portion of the stock in the company for organization purposes.

W. H. (Billy) Cunningham, of Beaumont, Texas, and Seth Ely, of Tulsa, Oklahoma, have organized the Cunningham Drilling Company, to do a general contracting business. They have been associated for some time in production in Oklahoma, as the Roberts Oil Company, at Twin Hills. Billy is one of the best known contractors in Texas and Louisiana, and has also sagaciated down in South America and Mexico, and his experience entitles him to do business anywhere with any kind of tools.

p. 6. Recent Deaths (p. 4, 6). Charles Van Sickle died suddenly of heart disease, on the evening of Monday, April 17, 1911, at the home of his son, Walter S. Van Sickle, in Fort Smith, Arkansas. Mr. Van Sickle was manager of the Arkansas and Territorial Oil and Gas Company, a property under the management of H. M. Byllesby & Co., of Chicago. Mr. Van Sickle was born at Flint, Michigan, September 7, 1852, where he learned the trade of millwright in his early days. In 1898, he became interested in the oil producing business, purchasing leases in the Van Buren Oil Fields in Huntington County, Indiana, and extending his operations over a large range in that state. In 1898, he organized the Federal Oil Company, with general offices at Chicago, holding the position of vice-president and general manager. In 1906, Mr. Van Sickle went to Fort Smith, Arkansas, identifying himself with the H. M. Byllesby & Co. interests, and taking a prominent part in the development of the gas field near Fort Smith, becoming manager of the Arkansas and Territorial Oil and Gas Company, and serving in that capacity up to the time of his death. Mr. Van Sickle was about to leave Fort Smith on a business trip to Chicago, when he was taken suddenly ill with heart trouble, and died in a few hours. Deceased is survived by one son, Walter S. Van Sickle, who is assistant manager of the Arkansas and Territorial Oil and Gas Company.

p. 16. Mid-Continent Fields, Oklahoma. Southeastern Oklahoma. The second attempt of the local company at Poteau, to find something worthwhile, resulted in a dry hole. The well was drilled in Section 21, T. 7 N., R. 26 E., to a depth of 1,865 feet. The first well was a gusher. In the NE corner of the NE 1/4 of Section 4, T. 7 N., R. 26 E., near Cameron, A. J. Yoke and associates are drilling a test well and are now 300 feet deep.

J. W. Hamilton on the Heavener Farm, is down 1,700 feet with a crooked hole. This is near Hodgens, Oklahoma, and No. 2 is drilling at 800 feet.

Rood & Malloy in the SW 1/4 of Section 6, T. 9 N., R. 25 E, drilled to a depth of 1,655 feet and got a 2,000,000 cfcpd gasser, after shooting with 200 quarts. No. 2 in the northeast corner of the NE 1/4 of Section 12, T. 9 N., R. 24 E. is drilling at 300 feet.

The Appleton-Meridian Oil Company is 750 feet deep, in a test well at Quinton, in Section 6, T. 7 N., R. 19 E., and the last 130 feet has been a sandy formation.

The well drilling at Stigler, is 450 feet deep, with a great deal of salt water.

It has begun to look as if Weleetka is a dead one as far as oil and gas is concerned. The Northern Oil Company has another dry hole in its holdings there. It is on the Lucy Yahole land in Section 27, T. 10 N., R. 11 E., a mile and a half southeast of town. The hole was plugged and abandoned last week at a depth of 2,500 feet.

p. 19. Incorporations. The citizens of Mulhall, Oklahoma, have raised \$5,000 to drill for oil and gas and have organized with the following board of directors: J. J. Donahoe, R. M. Kincaid, L. K. Meek, A. T. Millan. G. H.

Champion, W. D. Schultz, J. J. Estus, and W. C. Bradwell.

p. 19. Gasoline Plow. The Lewiston, Idaho, Orchards Company, now has in operation on its 5,000-acre tract, the first gasoline traction-plow ever used in the northwest. The machine is an 80 horse power engine, with four two-bottom 16-inch gang plows attached. The implement plows 40 acres of ground in 24 hours, and harrows the soil as it is plowed. Two men operate the machine - an engineer and a plow tender. The engine is equipped with a powerful searchlight, and the plowing goes on uninterruptedly night and day, except for necessary stops for fuel, and to change the plow shares. The operators work in regular shifts, one crew taking the place of the other often without stopping the engine.

p. 22-24. Accumulation of Petroleum, by L. L. Hutchison, A. B., M.S. The accumulation of oil has been explained by three theories: (1) The crevice and line hypothesis, that certain lines control deposition of oil; (2) The Anticlinal Theory; and (3) The hydraulic theory.

Professor Evans, of Marietta, Ohio, said that oil is contained in cavities or fissures in the rocks, together with water and gas, arranged according to their specific gravities. Drilling tools sometimes fell several feet into cavities, as recorded by Fenneman in the Florence, Colorado, Field. Many persons seemed to think that oil occurs like an underground lake, instead of filling the interstitial pores in rocks. Many early operators believed in oil lines, and that oil accumulated along certain trends or lines. Early oil men believed that there was a N. 45° E. trend to oil in Pennsylvania and the Appalachian region, and a North-South trend in Oklahoma, and they still discuss this in prospecting.

The anticlinal theory was proposed independently by a number of geologists in 1859-1861. T. Sperry Hunt published the theory in 1859 in *The Canadian Naturalist*, and this maybe the first published document. E. S. Andrews, of Marietta, Ohio, independently had the same idea, publishing in the *American Journal of Science* in 1861. H. Hoefler, of Austria, also independently had the anticlinal theory, and published in "The Petroleum Industry of North America", pp. 77-80. J. C. White, of West Virginia, was the first to test the theory, resulting in the discovery of several of the most prolific gas fields in West Virginia. A modification is the aerated anticline or terrace, first observed by Edward Orton, Sr. Another modification are sandstone lentils in shale, as mentioned by Gale in connection with the Rangely Field of Colorado. The Pennsylvanian sandstone of northeastern Oklahoma occur like that also.

p. 26. New Incorporations. The Savannah Oil Company, of Tulsa, Oklahoma, has been incorporated by W. D. Abbott, R. A. Josey, and L. L. Greer. The Chestnut Oil Company, of Tulsa, Oklahoma, has been incorporated for \$10,000, by E. L. Blake, F. R. Crowell, and Albert Brown.

The Wood River Oil Company, of Petrolia, Texas, has been incorporated for \$10,000, by O. Groves, Claude Groves, and W. H. Gardner.

The Princeton Oil and Gas Company, of Tulsa, Oklahoma, has been incorporated for \$10,000, by A. E. Watts, James E. Duffy, and A. E. White.

The Sand Creek, Texas, Oil and Development Company has been incorporated, for \$3,550 by W. C. Taylor, G. K. Proctor, and W.R. Vaughn.

The Beenax Oil Company of Muskogee, Oklahoma, has been incorporated for \$5,000 by J. Garfield Buell, C. E. Buchanan, and Ralph W. Leftwich.

The McFall Oil and Gas Company, of Tulsa, Oklahoma, has been incorporated for \$10,000, by W. C. Tucker of Pawhuska, and H. N. Greis and E. A. Ross, of Tulsa.

The Austo-Gasoline Refining Company, of McAlester, Oklahoma, has been incorporated for \$10,000 by Samuel P. Nicholson, H. C. Lette, and A. J. Vaughn.

The Big Six Oil and Gas Company, of McAlester, Oklahoma, has been incorporated for \$6,000, by Robert F. Turner and R. S. Briggs, of Indianola, and Harry Kyle, of McAlester.

The Arkansas Grand Prairie Oil and Gas Co. of Pittsburgh, Pennsylvania, has been incorporated at Dover, Delaware, April 12 for \$100,000 by M. J. Buck,

J. J. Harter, and Frank H. Griffin.

Vol. 9, No. 47, May 4, 1911, p. 4. Trade Notes. (p. 2-4). The DuPont Powder Company has moved the headquarters for its nitroglycerin department from St. Louis to Tulsa, Oklahoma, covering everything west of the Ohio fields. R. P. Barton, the general manager; Frank P. Wentworth, D. A. Koons, and C. E. Dille, the headquarters force, will occupy rooms on the fourth floor of the Drew Building, including the occasional visits of "Billy" Warmcastle. Mr. Barton keeps in touch with every wildcat well between Pittsburg and Wyoming.

An oil-burning locomotive first steamed its way into a Montreal Railway Station, and brought a passenger train in from Plattsburg on the Delaware and Hudson Railway April 18. It is one of the engines that the railroad put on its lines in consequence of the New York state law recently passed, forbidding the use of coal on the railways in certain districts during the summer months. The law aims at preventing sparks from engines, starting disastrous forest fires in the wooded districts, especially the Adirondacks.

A trial voyage is being made between Rouen, France, and Philadelphia, by the petroleum ship Quevilly, equipped with auxiliary gasoline motors. They hope to reduce sailing from four and eight weeks to 3 weeks, to cross the ocean.

The Standard Oil Company's two refining plants at Neodesha, Kansas, and Sugar Creek, Missouri, have inquiries for 10,000 barrels a day more fuel oil than they can supply. Oil-burning stoves for heating and cooking is largely responsible. Kerosene in 5-gallon cans is 25 cents per can, or 5 cents a gallon.

p. 4,6,8, Personal Mention. W. G. Park, who has made Beaumont his headquarters for some years, was a Tulsa visitor Monday, en route from Kansas City to Dallas, Texas, and Waurika, Oklahoma. He is the organizer of the Sunshine Oil Company, in Beaumont, operating in southern Oklahoma. He also has some production in the Bird Creek District.

John Galloway has returned to his home at Jamestown, New York, after an extended investigation of southern Arkansas and northern Louisiana as a producing investment, taking his conclusions with him. As in the early days of the eastern fields, Mr. Galloway traversed many miles of the country afoot, with the inseparable umbrella, studying the field at close range.

Charles Page has returned from New York, where he was called to close the deal for his Oklahoma oil properties. Clifton B. Harmon and associates, and William M. Graham, of Los Angeles, California, purchased the properties for \$1,000,000, taking possession May 1. Mr. Page is building a street car system from Tulsa to Sand Springs, nine miles; and is constructing a water system from a reservoir holding 3,800,000 gallons of pure spring water; and is building a dormitory and auxiliary buildings on his 5,000 acre farm at Sand Springs to accommodate 100 children, in an orphan asylum and sanitarium, maintained at his own expense and energy. Mr. Page still has a few leases left, about 20,000 acres. Wells will be drilled on these tracts regularly. Mr. Page came to Tulsa ten years ago with \$16,000 in cash, from Cripple Creek and Denver, Colorado, which he spent in the Red Fork Field. He still owns the St. James Hotel in Denver. He is a Republican in a Democratic background, worth at least \$2,000,000. His residence and offices in Tulsa are among the plain ones, and his automobile is not one of the show ones.

p. 8, 10. Recent Deaths. Dennis J. McMahan died at the home of his daughter, Mrs. P. H. Quinn, at Shreveport, Louisiana, on Wednesday, April 26, 1911, at 11:30 a.m. The deceased was born in Ireland 76 years ago, and came to Pennsylvania at an early age, and started in the oil business, engaging himself with the Standard Oil company, and continued in the employ of that company for nearly 35 years, the last 15 years being retired on a pension. The loss of his wife about one year ago affected him strongly, and he shortly afterward made a trip to Shreveport to visit his children, remaining there until his death. He was about to return to his home when he was taken sick, and his son, J. L. McMahan, a well-known Oklahoma operator, arrived in the city of Shreveport several weeks

ago, to take the old gentleman home. Mr. McMahon, who was a devout Catholic, attended services Easter Sunday, and felt so well that he insisted on walking home. He was taken ill that day and never recovered. He had been looking forward to his return to the old home with great pleasure, speaking constantly of the time when he should go. The remains were taken to Butler, Pennsylvania, on Friday, April 28, and were accompanied by Mr. and Mrs. P. H. Quinn, and four of his sons, J. L., of Oklahoma, T. J. oil dispatcher for The Texas Company at Houston, D. F., of Shreveport, general superintendent for The Louisiana Company, and J. C., of Tampico, the pipe line superintendent for the Mexico Fuel Oil Company. The latter son was wired, for when it was known that the father could not recover, he arrived in Shreveport the morning the body was taken home. Beside the above children, Mr. McMahon is survived by a son, T. L., of Gibonsburg, Ohio, and two daughters, Mrs. Charles P. Monahan of Greensburg, Pennsylvania, and Mrs. A. L. Parrish, of Mannington, West Virginia. The accompanying picture was taken 10 years ago, and is an excellent likeness. Mr. McMahon made many warm friends during his stay in Shreveport, and a large number of friends accompanied the remains to the depot.

p. 12. Changing management. The Central Fuel Oil Company, a Delaware Corporation organized to take over a large number of Oklahoma producing properties, capitalized at \$15,000,000, with an issue of \$6,000,000 in bonds, underwritten in New York and London, to pay \$5,100,000 for the properties, is making some changes in its official family. George C. Priestley, who was one of the principal promoters and vice-president and general manager in Oklahoma, has resigned tentatively, pending a new deal. It is possible that arrangements more to his liking may result in the withdrawal of his resignation.

Harvey Barnes, who was assistant to Mr. Priestley, has also left the company. Mr. Priestley and Mr. Barnes, with several associates, have organized the Warren Oil Company, with holdings in the Bartlesville Field, and are now actively developing the leases. W. S. Porter, of Los Angeles, California, is president of the Central Fuel Oil Company, and Samuel Untermeyer, of New York, is the representative of the eastern and European financiers and underwriters.

p. 14. Wildcat Tests. North of Poteau, in LeFlore County, near the Fort Smith Gas Field, Rood & Malloy got a dry hole in their last venture, but are starting another test near their fair gas well, located on the H. V. Smith land in Section 6, T. 9 N., R. 25 E., the drilling well being on the Folsom land, Section 12, T 9 N., R. 24 E., farther southwest.

Near Atoka, 44 miles north of Denison, Texas, A. R. And Charles Fordree, C. B. Weeks, D. H. Hutchinson, and others, are drilling a test in Section 28, T. 3 S., R. 11 E., now 400 feet deep, waiting for pipe to go 2,000 feet, with two more to be drilled later. Good formations have been found in previous tests in that vicinity.

The Sunshine Oil Company is resuming work on its test on the Red River, half way between Waurika and Hastings, and 12 miles east of the Clay County production in Texas. This test started a year and a half ago, and has been shut down at 1,500 feet for a long time. W. G. Park, of Beaumont, Texas, has 8,500 acres under lease along the Red River there, and thinks he will open a pool in the 1,700 foot sand found across the river.

p. 16-17. Looks Like a Field. Wichita and Wilbarger Counties, North Texas, Showing Good. The well drilled a month ago by the Corsicana Petroleum Company #1 Putnam, Wichita County, Texas, which is producing 250 bopd of 43 gravity from a 1,750-foot formation, is followed by a 200 bopd well for the Producers Oil Company 3-1/2 miles southeast of Vernon, the county seat of Wilbarger County, west of Wichita County, in what is commonly known as the Electra District. Two wells have been drilled in the Petrolia District, producing from the same formation, the one for the Guffey Petroleum Company, on the Dunn Farm, starting at 700 bopd and holding pretty steady since last December. These three wells mark a regular

formation, extending over a distance of nearly 100 miles east and west along the south side of the Red River, that ought to suggest a possible oil and gas field of considerable proportions and of commercial importance if developed.

This North Texas production is on a general southwestern trend via Wheeler in southern Oklahoma, and seems to extend into a direct and unbroken extension of the Kansas and Oklahoma trend of oil and gas deposits, with outcrops of showings of asphalt, oil, and gas straight north of Gotebo, Wheeler, Lawton, and Jackson County in Oklahoma.

Vol. 9, No. 48, May 11, 1911, p. 6. The Natural Gas Association (p. 6-10). History of the Association. The association was organized in 1906, on February 7, when C. W. Sears and M. M. Sweetman met, inviting some people to a meeting in the Midland Hotel, Kansas City, Missouri, on Feb. 20, 1906. Twenty-one people showed up at the first meeting; K. M. Mitchell, J. H. Dunkle, E. S. Springer, E. S. Becker, George S. Barrows, C. L. Bullock, James Young, M. M. Sweetman, C. H. Pattison, W. L. Pattison, J. L. Maloney, W. M. Welch, W. H. McKenzie, Edward Cadman, F. W. Farrington, C. W. Sears, H. N. Seigfried, M. W. Walsh, J. F. Owens, J. H. Shreve, and H. B. Billings; with K. M. Mitchell president.

p. 12. Little Flights. The Oklahoma Geological Survey, Norman, Oklahoma, announces that several bulletins will be ready for mailing now or within a few weeks. The list is as follows: Bull. No. 2, Preliminary report on the rock asphalt, asphaltite, petroleum, and natural gas in Oklahoma, postage 10 cents. Bull. No. 3, Geology and mineral resources of the Arbuckle Mountains, postage 5 cents. Bull. No. 5, Structural materials of Oklahoma (issued in May), postage 5 cents. Bull. No. 6, Director's report and brief chapters on Oklahoma minerals, postage 5 cents. Bull. No. 7, Clays and clay industries of Oklahoma (to be issued in July or August), postage 5 cents.

p. 14. Trade Notes. (P. 12-14). The demand for products for oiling the streets in all parts of the country is increasing, and the number of cities trying the experiment this summer is evidence that the business will grow rapidly. Kansas City, Missouri, through the efforts of the Good Roads Committee of the Automobile Club, is oiling Swope Park, and work will begin on the Hickman's Mill Road this week.

Dr. L. W. Fisher and F. H. Hammer, of San Francisco, California, are in Houston, Texas, for the purpose of organizing a company to manufacture oil orchard heaters at that point. The heaters have proven of great value in Colorado, California, Oregon, Washington, and Florida. They are used mostly in the fruit growing districts, and are valuable as protection against frost.

Gasoline engines have about put the windmills out of business according to J. C. Rhoades, of Ellinwood, Kansas. "About all that is left of the old windmills put up a dozen years ago is the iron tower, with the wheel hanging to it, bent out of shape by storms. The gasoline engines can be used at any time, and the difference in cost is not noticed by the farmers. The engines are on nearly every farm in our country."

A joint unincorporated association to be known as The Magnolia Petroleum Company has been organized, with headquarters at Galveston, and plants and offices at Beaumont and Corsicana, Texas. The company will take over the refineries at Corsicana and Beaumont, and all other properties which have been owned and operated under the firm name of John Sealy & Co. The trustees of the association will be John Sealy, R. Waverly Smith, O. C. Edwards, E. R. Brown, and George C. Greer. John Sealy was elected president; O. C. Edwards and E. R. Brown, vice-presidents; Courtenay Marshall, secretary and assistant treasurer, and W. C. Proctor, treasurer and assistant secretary. In addition to the operation of the refineries mentioned above, the association will enter actively into the general distribution and marketing of petroleum and allied products, and will establish stations for this purpose in the principal cities of Texas.

p. 14. Personal Mention. (p. 14, 16). C. M. Noble has moved from Joplin, Missouri, to Tulsa, Oklahoma, to be nearer his petroleum interests in Oklahoma and Kansas, operating as Noble & Company. They are doing contract work in the Tulsa District.

E. R. Minshall, of Tulsa, Oklahoma, called at The Journal's St. Louis office en route home from a short visit with Mrs. Minshall. He is a graduate geologist, and after starting in the West Virginia fields, was sent to Oklahoma as geological superintendent for Guffey & Galey in their first Oklahoma investments. Since that time, Mr. Minshall has secured oil and gas production, associated with Colonel Suppes and W. A. Springer, operating with the latter gentleman, the Broken Arrow Natural Gas Plant.

Mrs. Elizabeth Cochrane Seaman, president of the American Steel Barrel Co., Brooklyn, New York, was an interesting visitor at the St. Louis convention of the petroleum marketers, in the interest of her company. She asked the delegates to respond to the question "What is the most dangerous thing you can name?" and her answer was "A leak in business, powder cans, and oil barrels", ignoring the interrogation of a delegate, "A woman". As the active representative of an industrial company, the earlier personality and identity of Mrs. Seaman was completely lost. Years ago, the newspapers were alive with the achievements of "Nellie Bly", her most noteworthy assignment having been a record-breaking tour of the world. "Nellie Bly" is Mrs. Seaman.

p. 18. Recent Deaths. John Henry Flagg, formerly counsel for the Standard Oil Company, died at his residence in New York City May 1, 1911. He had been an invalid for the past ten years. Mr. Flagg was born in Vermont in 1843. He studied law, and for ten years was Clerk of the Senate at Washington. When he came to New York he became identified with the Standard Oil Company, and held the position of counsel for many years. Since his retirement, he has written extensively on law and other subjects, and has published a book of poems.

p. 20. Gasoline from Natural Gas, by F. H. Taylor. When Andrew Fasnemeyer began making gasoline from natural gas in the Fall of 1904, on the Emery lease, near Titusville, Pennsylvania, and sold it, another source of income was added to the oil business. Although drip gasoline was known since 1860, this was the first time it was marketed, and a compression system used to collect it. He sold it at \$4.50 a barrel, selling 16 barrels in 1904, 21 barrels in May 1905 and 21 barrels in August 1905, and 31 barrels in October 1905. It was 80 to 90 gravity when distilled, but 72 to 74 gravity when sold because of evaporation. At present, he is making 64 gallons a day of 74 gravity gasoline from 7,000 cfcpd, or about 8 to 9 gallons per 1,000 cubic feet, counting some loss.

p. 22. Mid-Continent Fields. Oklahoma. Wildcat Operations. Rood, Malloy & Foster, of Bartlesville, are doing some prospect work in LeFlore County, north of Poteau, where they have one fair gas well, and thinks a shallow sand that runs fairly regular will produce oil.

The Test Oil Company is starting two tests in the southwestern part of Pittsburg County, below McAlester, where the formations are regular.

Some newspaper space has been devoted to the country around Roff, on the Frisco Railroad, about 100 miles south of Tulsa, where it is said some Hollanders leased up about 50,000 acres and announced they would start seven strings of tools running at once. There is one test under way near Roff, shut down for some time, but about to start up again, for Okmulgee parties.

p. 28. Natural Gas in the United States, 1882-1909. by B. Hill and David T. Day, U.S. Geological Survey Pamphlet. Indian Territory and Oklahoma records did not start until 1902. The numbers are in dollars. 1902 (500), 1903, (1,000), 1904 (49,665), 1905, (130, 137), 1906 (259,862), 1907 (417, 221), 1908 (860, 169), and 1909 (1,806,193).

p. 32. Gas Notes. It is reported that 30 wells in the Fort Smith, Arkansas

Field have been sold to H. M. Byllesby & Co., of Chicago, for a consideration of \$427,500.

At a regular session of the council at Temple, Texas, a contract was awarded to Wallace & St. John, of Detroit, Michigan, to build and operate a gas plant at Temple. Work is to begin within three months, and the plant is to be in operation within a year.

The gas line of the Arkansas Natural Gas Company, from the Caddo, Louisiana, field to Little Rock, Arkansas, lacks but one mile of completion to that city, and the company expects to put gas into Little Rock on May 15. Nearby Arkansas cities will be supplied, notably Hot Springs and Pine Bluff.

p. 32. Incorporations. The Red Beds Oil and Gas Company, of Waurika, has been incorporated with a capital of \$50,000, by W. G. park, Houston, Texas; H. W. Lemons, of Waurika, Oklahoma, and B. C. Epperson, Dallas, Texas.

The Sycamore Oil and Gas Company, of Tulsa, Oklahoma, has been incorporated for \$50,000, by P. W. Clark, C. M. Williams, and J. H. Larson, all of Tulsa.

The Gibbons Oil Company, of Tulsa, Oklahoma, has been incorporated for \$5,000, by E. L. Wetherbee, W. A. Gibson, and A. C. Potter, of Tulsa.

The Shallow Sand Oil Company, of Tulsa, Oklahoma, has been incorporated for \$10,000, by Frederick A. Fulgham, Robert Jordan, and Mamie Jordan, all of Tulsa.

The Moccasin Oil Company, of Oklahoma City, has been incorporated for \$50,000 by A. O. Campbell, of Lincoln, Nebraska; Frank J. Kem, and S. A. Layton, of Oklahoma City.

The Dallas Queen Oil Company, of Muskogee, Oklahoma, has been incorporated for \$10,000, by E. M. Reardon and M. N. Baker, of Dallas, A. M. Gamon, of Chelsea, S. D. Felt of Tulsa, and G. M. Hansom, of Muskogee.

The Eline Oil and Gas Company, of Tulsa, Oklahoma, has been incorporated for \$5,000 by E. R. Perry, Marion Dickerman, and R. E. Swearingen, all of Tulsa.

The Vian Oil and Gas Company, of Vian, Oklahoma, has been incorporated for \$2,500 by R. F. Allen, J.F. Brockman, G.H. Scott, T. J. Keener, D. S. Coleman, and A. J. Kennedy, all of Vian.

The Arkansas Grand Prairie Oil and Gas Company has been incorporated for \$100,000, by M. J. Buck, J. J. Harter, and F. H. Gucey, of Pittsburgh, Pennsylvania.

Vol. 9, No. 49, May 18, 1911, p. 1. The Standard Oil Decision. The Supreme Court of the United States last Monday affirmed the decision of the Circuit Court of Appeals at St. Louis declaring the Standard Oil Company an illegal trust, monopoly, or combination, under sections one and two of the Sherman Antitrust Law, and decreeing its dissolution. The opinion was unanimous, except that Justice Harlan held that any monopoly, legal or illegal, is under the ban of the law when in restraint of trade or when it controls a major per cent of business. The best feature of the decision is its unanimity, which leaves no standing room for doubt and hesitation. The decree of the lower court was modified to the extent that the Standard Oil Company is given six months time in which to arrange its affairs and dissolve its existing organization, and also the company and subsidiaries are permitted to do an interstate business pending the dissolution, which was denied it by the lower court. Chief Justice White delivered the opinion, which contained about 20,000 words.

Justice White, in construing sections one and two of the Sherman Antitrust Law, concluded that the law was not to be interpreted literally and absolutely, but by a "rule of reason", holding that only the courts were clothed with the authority to "reason". This special interpretation by White formed the irritant that brought out the dissenting language of Justice Harlan, who holds that the Sherman Law is authoritative, arbitrary, and automatic against every individual and corporation, and is not subject to the "rule of reason" or any "rule of reason" offered by any judge or number of judges. This phraseology by the Chief Justice is seized upon by nearly every corporation as the avenue through which it can escape consequences like those against Standard, being more a rule of personal preference in tagging an individual or a corporation as good or bad.

Government protective tariffs amount to almost the same thing, and the "rule of reason" can be used to keep the steel trust, sugar trust, tobacco trust, railroad trust, lumber trust, coal trust, leather trust, meat trust, labor trust, banking trusts, etc., in tact, if they appear good.

The decision has exposed the Republican Party and will disclose the Democratic Party. Managers of corporations will carry any banner if they can fool this administration. The Republican Party does not know whether it is afoot or horseback, and the Democratic Party, with an opportunity to almost elect a yellow dog, is studying the gambler's chance of standing pat or drawing two cards.

p. 14. New Incorporations. The Kenger Oil and Gas Company, of Tulsa, Oklahoma, has been incorporated for \$10,000, by P. D. McConnell, C. B. Reiney, and E. R. Perry, all of Tulsa.

The Exeter Oil Company, of Tulsa, Oklahoma, has been incorporated, with a capital of \$12,000, by J. S. Moffet, C. J. Wrightsman, and Guy L. Reed, all of Tulsa.

The Sasakwa Oil Company, of Oklahoma City, Oklahoma, has been incorporated for \$30,000, by C. C. Pettenger, J. S. Patrick, and F. H. Foster, all of Oklahoma City.

p. VI-VIII. Oklahoma. Oil wells competed and drilled. Miscellaneous Completions. (p. VII).

Sec. 21-7N-26E,	Poteau No. 1.	dry
Sec. 6 - 9N-25E,	Rood & Malloy No. 1	gas

Drilling. (p. VIII).

Ponca City,	101 Ranch No. 12	drilling
Lawton,	Local No. 1	drilling
Woodville,	Marshall Co. No. 1	drilling
Ryan, Jefferson Co.,	Ryan Oil Co. No. 2	drilling
Alva,	Local No. 1	drilling
Oklahoma City,	Local Co. No. 1	drilling
Guthrie,	Local Co. No. 1	drilling
Sec. 4-7N-26E,	Cameron, A. J. Yoke & Co., No. 1	drilling
Hodgens, Heavener	J. W. Hamilton No. 1	drilling
Sec. 12-9N-24E	Rood & Malloy No. 2	drilling
Sec. 6-7N-19E,	Quinton, Appleton-Meridian No. 1	drilling
Sec. 28-3S-11E,	Atoka, Local Co. No. 1	drilling

Vol. 9, No. 50, May 25, 1911, p. 4. Central Fuel enjoined. The Texas Company filed a temporary injunction against Central Fuel Oil Company, in U.S. District Court of Eastern Oklahoma, to insure that Central would not violate their contract to deliver 540,000 barrels of oil per month at about 89 cents a barrel, until 2,500,000 barrels of fuel oil was delivered to the Southern Pacific Railroad, then at 65 cents a barrel. Central is a Delaware corporation, organized a year ago by W. S. Porter, of California, as president; George C. Priestley, of Bartlesville, vice-president and general manager; and Samuel Untermeyer, of New York, representative of New York and English financial interests. The company is capitalized at \$15,000,000 and has issued bonds for \$6,000,000. Twenty-eight producing oil companies in Oklahoma sold their properties to Central for \$5,100,000 dollars.

p. 4. Little Flights. People obsessed with the magnitude of Standard Oil have ignored other almost equally strong companies. Standard is capitalized at \$100,000,000.

The Union Oil Company of California is a \$100,000,000 corporation, and the Associated Oil Company of California is almost as strong.

The Texas Company increased its capital last Saturday to \$50,000,000.

The Gulf Pipe Line Company and affiliated organizations is capitalized at \$42,000,000.

The American Oilfields Co. and California subsidiaries, and the Mexican Petroleum Company, a California and Mexican organization, are capitalized at

nearly \$100,000,000 each.

The Waters-Pierce Oil Company, in Mexico, is a strong refining and marketing company.

The Pearson Company, an English company, is heavily invested in Mexico and other countries.

In Europe and Asia, the Royal Dutch Shell combination, the Nobels, and the Burma Oil Company, control hundreds of millions of dollars and do an immense business, with Shell having a strong foothold in the United States.

p. 4, 6. Personal Mention. Capt. Peter Grace, who now lives at Robinson, Illinois, is a regular visitor to Carlyle, where he and associates have some holdings. Since the early days at Pithole, the captain has been in many oil fields, and has a great fund of experience and observation that is very interesting to the younger operators. Like all the active pioneers of the petroleum industry, he is well preserved physically for a man nearing the 70 milestone.

A. J. Yoke has moved back to Coffeyville, Kansas, from Fort Smith, Arkansas, after a stay there of several years. In partnership with Frank Brown, of Independence, Kansas, he established a brick plant at Fort Smith, and developed considerable gas in Sebastian County, Arkansas, but the Fort Smith promoters were too tight for even A. J., and he is mighty glad to get away from there. He has quite an acreage on the Oklahoma side of the state line, near Fort Smith, and is doing some drilling there for gas.

The Warren, Pennsylvania, Taylors are well known in the refining trade. Henry is the smiling brother, the affable salesman of petroleum products, while George, the cross-looking fellow, builds refineries and operates them. For two years, George has been running the Chelsea Refining Company's plant at Chelsea, Oklahoma, being one of the stockholders, and has made a success of the business with Treasurer Martin. Both of the brothers learned the trade from the ground up at Warren, Pennsylvania, and both were at the St. Louis meeting of the independent marketers, about the only way they can be distinguished being Henry's smile.

p. 8. Recent Deaths. James Smith, chief of the manufacturing department of the Standard Oil Company, died suddenly at his home in New York City, May 15, of cerebral hemorrhage. Mr. Smith was born in Cleveland, Ohio, December 12, 1858. He entered the employ of the Standard Oil Company in Cleveland in 1873, in the railroad department. He was soon made private secretary to Samuel Andrews and when the latter retired in 1880, Mr. Smith was called to New York where he was made assistant manager of the Bayonne refinery. In 1885, he was promoted to private secretary to A. M. McGregor, the head of the manufacturing department. In 1896, he became a member of the company's council. In 1900, after the fire of July 3-4 which destroyed the Bayonne works, he was made manager and sent to clear away the 40 acres of ruins and rebuild the refinery. He remained manager of the Bayonne plant until 1908, when he was advanced to the head of the manufacturing department. Mr. Smith never married.

p. 10-19. Full Text of Standard Oil Company Decision. The Standard Oil Company of New Jersey and thirty-three other corporations, John D. Rockefeller, William Rockefeller, and five other individual defendants, prosecute this appeal to reverse a decree of the court below. Such decree was entered upon a bill filed by the United States under authority of Section 4 of the Act of July 2, 1890, known as the Anti-Trust Act, and had for its object the enforcement of the provisions of that act.

The record consists of 23 volumes, aggregating 12,000 pages, covering business transactions of nearly forty years, so only an outline is given here.

The bill and exhibits covering 170 pages was filed on Nov. 15, 1906. The defendants were 69 corporations and 7 individuals, including Standard Oil Company of New Jersey, Iowa, Kansas, Kentucky, Nebraska, New York, and Ohio. They were charged with conspiring "to restrain the trade and commerce in petroleum ...in the United States and foreign nations, and to monopolize the said commerce."

The conspiracy was alleged to have been formed in or about the year 1870, by 3 of the individuals, John D. Rockefeller, William Rockefeller, and Henry M. Flagler. The conspiracy was divided into 3 periods; 1870-1882, 1882-1899, and 1899-1906, named the first, second, and third periods.

Prior to 1870, John D. Rockefeller, William Rockefeller, and other named individuals composed 3 separate partnerships, engaged in refining crude oil and shipping the refined products interstate. In 1870, they formed a corporation called Standard Oil Company of Ohio, with ownership by each in proportion to the stock they held. By 1872 they had acquired all but 3 or 4 of the 35 to 40 oil refineries located in Cleveland, Ohio, and were engaged in purchasing, shipping, refining, and selling petroleum and its products in the United States, for the purpose of fixing the price of crude oil and refined products, and controlling the transportation therein, and thereby restraining trade and commerce and monopolizing commerce in the United States. It was charged that they operated interstate and intrastate, and obtained preferential rates and rebates from various railroad companies, forcing competitors to join the corporation or to be forced out of business. They acquired refineries in New York, Pennsylvania, Ohio, and elsewhere, and spread their control of the industry. The corporation obtained control of the pipe lines from the oil fields to Cleveland, Pittsburgh, Titusville, Philadelphia, New York, New Jersey, and thereby controlled 90 percent of the oil business of producing, shipping, refining, and selling in the United States, and thus was able to fix the price of crude oil and its products and to restrain and monopolize all oil products in the United States.

From 1882 to 1899, it was charged that the defendants entered into a Trust agreement, whereby 9 Trustees took over the management of all subsidiary companies. The trust agreement was made in January 1882. The stock of 40 corporations was vested in the Trustees "to be held for all parties in interest jointly". The names of the corporations, and value of stock owned by the Standard Oil Trust, and percentage of ownership by the trust are here given, by states:

Name and State	Capital Stock Standard Trust	% Trust Ownership
New York State		
Acme Oil Co., manufacturers of petroleum products.	\$300,000	100%
Atlas Refining Co., manufacturers of petroleum products.	200,000	100%
American Wick Manufacturing Co., manufacturers lamp wicks,	25,000	100%
Bush & Denslow Mfg. Co., petroleum products.	500,000	50%
Chesebrough Mfg. Co., petroleum.	500,000	2.4-9.9%
Central Refg. Co. (Limited), petroleum products.	200,000	1-47.2%
Devoe Mfg. Co., packers, manufacturers of petroleum.	300,000	100%
Empire Refg. Co. (Limited), mfg. petroleum products.	400,000	80%
Oswego Mfg. Co., mfg. wood cases.	400,000	100%
Pratt Mfg. Co., mfg. petroleum products.	500,000	100%
Standard Oil Co. of New York, mfg. petroleum products.	5,000,000	100%
Stone & Fleming Mfg. Co. (Limited), mfg. petroleum prod.	250,000	100%
Thompson & Bedford Co. (Ltd.), mfg. petroleum products.	250,000	80%
Vacuum Oil Co., mfg. petroleum products.	25,000	75%
New Jersey		
Eagle Oil Co., mfg. of petroleum products.	350,000	100%
McKirgan Oil Co., jobbers of petroleum products.	75,000	100%
Standard Oil Co. of New Jersey, mfg. petroleum products.	3,000,000	100%
Pennsylvania		
Acme Oil Co., mfg. petroleum products.	300,000	100%
Atlantic Refining Co., mfg. of petroleum products.	400,000	100%
Galena Oil Works (Limited), mfg. petroleum products.	450,000	86.5%
Imperial Refg. Co. (Limited), mfg. petroleum products.	300,000	100%
Producers Consolidated Land and Petroleum Co., crude oil.	1,000,000	5-13%
National Transit Co., transportation of crude oil.	25,455,900	94%
Standard Oil Co., mfg. petroleum products	400,000	100%
Signal Oil Works (Limited), mfg. petroleum products.	400,000	38%

Ohio		
Consolidated Tank Line Co., jobbers, petroleum products.	1,000,000	57%
Inland Oil Co., jobbers of petroleum products.	50,000	70%
Standard Oil Co., mfg. petroleum products.	9,500,000	100%
Solar Refining Co., mfg. petroleum products.	500,000	100%
Kentucky		
Standard Oil Co., jobbers of petroleum products.	600,000	100%
Maryland		
Baltimore United Oil Co., mfg. petroleum products.	60,000	5.6-6.9%
West Virginia		
Camden Consolidated Oil Co., mfg. petroleum products.	200,000	54%
Minnesota		
Standard Oil Co., jobbers of petroleum products.	400,000	100%
Missouri		
Waters-Pierce Oil Co., jobbers of petroleum products.	400,000	50%
Massachusetts		
Beacon Oil Co., jobbers of petroleum products.	400,000	100%
Maverick Oil Co., jobbers of petroleum products.	100,000	100%
Maine		
Portland Kerosene Oil Co., jobbers of petroleum products.	300,000	100%
Iowa		
Standard Oil Co., jobbers of petroleum products.	600,600	60%
Continental Oil Co., jobbers of petroleum products	300,000	62.5%

The trust was to continue "during the lives of the survivors and survivor of the Trustees named in the agreement, and for twenty-one years thereafter." By 1888, it was alleged that the Standard Trust owned or "unlawfully controlled" the stock of the various named companies. On March 2, 1892, the Supreme Court of Ohio entered a decree adjudging the trust agreement to be void, not only because the Standard Oil Company of Ohio was a party to the trust, but also because they restrained trade and created a monopoly. As a result, the stock was transferred from some 84 companies that Standard controlled to 20 which they had originally held, changing names only. In 1897, the Attorney General of Ohio filed contempt proceedings.

In 1899, the Standard Oil Company of New Jersey was created as a holding corporation, to carry on the same business, having acquired the previous stock from the various corporations. The value of the stock was changed from \$10,000,000 on March 19, 1892 to \$110,000,000 in January 1899, with new acquisitions in Oklahoma, California, and Kansas, and they were still charged with restraining trade and monopolizing the oil business, through rebates, preferential rates by railroads, control of pipe lines, contracts with competitors, local price cutting, espionage against competitors, and operation of bogus companies, and division of the United States into districts which they could control through pricing and operation, thus leading to "enormous and unreasonable profits."

On June 24, 1907, a special examiner was appointed to take the evidence, and his report was filed March 22, 1909, and it was heard on April 5-10, 1909, before a Circuit Court of 4 judges. The court decided in favor of the United States, citing Section 2 of the Sherman Antitrust Act. Four companies did not appeal, one being the Corsicana Refining Company. (It was difficult to prove in many cases that the money made by the Standard was due to good business practices or due to subterfuge, and many parts of the case had to be dropped. If the government passes laws on producing, moving, and pricing of oil and gas, either by taxation or regulation, then they too would be in violation of the Sherman Antitrust Act, giving the government an unfair advantage by price fixing and monopoly, which would destroy small companies with small cash flow, but favor large companies that could sustain fluctuating prices, and who could have lobby power with certain politicians. Also, foreign oil companies could have unfair competition, forcing nationalization of the oil business.) The intent of the Sherman Antitrust Act was to protect the public from any wrongdoing and to allow freedom of trade. The original definition of a monopoly in England was the allowance by the King

to grant to a person certain exclusive rights to a business. Only favored people of the King had monopolies, and only the King had power. If injustices arose, such as price-fixing, only the King could pass laws against it. As a result, laws were gradually passed to protect the public against a corrupt King and his corrupt monopolies. Sovereign price-fixing and restraint of trade was the only previous violations of common law that could be found in statutes dating from 1772 to 1844, and so the government had to have some type of law that applied to an individual like John D. Rockefeller or to a private company such as Standard Oil Co. of Ohio, etc., so the Sherman Antitrust Act was passed in 1890. However, the interpretations of each part of the act were subject to wide variations.

In 1911, the Standard Oil Company issued stock worth \$90,700,000, and exchanged this stock for that of other companies as follows:

Name of Company	Total Capital Stock	Stock owned by Standard
Anglo-American Oil Co. (Ltd.)	L1,000,000	L999,740
Atlantic Refining Company	\$5,000,000	\$5,000,000
Borne-Scrymaer Co.	200,000	199,700
Buckeye Pipe Line Co.	10,000,000	9,999,700
Chesebrough Mfg. Co. Con.	500,000	277,700
Colonial Oil Co.	250,000	249,300
Continental Oil Co.	300,000	300,000
Crescent Pipe Line Co.	3,000,000	3,000,000
Eureka Pipe Line Co.	5,000,000	4,999,400
Galena-Signal Oil Co.	10,000,000	7,079,500
Indiana Pipe Line Co.	1,000,000	999,700
Lawrence Natural Gas Co.	450,000	450,000
Mahoning Gas Fuel Co.	150,000	149,900
Mountain State Gas Co.	500,000	500,000
National Transit Co.	25,455,200	25,451,650
New York Transit Co.	5,000,000	5,000,000
Northern Pipe Line Co.	4,000,000	4,000,000
Northwestern Ohio Natural Gas Co.	2,775,250	1,649,450
Ohio Oil Co.	10,000,000	9,999,850
People's Natural Gas Co.	1,000,000	1,000,000
Pittsburgh Natural Gas Co.	310,000	310,000
Solar Refining Co.	500,000	499,400
Southern Pipe Line Co.	10,000,000	10,000,000
South Pennsylvania Oil Co.	2,500,000	2,500,000
Southwest Pennsylvania Pipe Line Co.	3,500,000	3,500,000
Standard Oil Co. of California	17,000,000	16,399,500
Standard Oil Co. of Indiana	1,000,000	999,000
Standard Oil Co. of Iowa	1,000,000	1,000,000
Standard Oil Co. of Kentucky	1,000,000	997,200
Standard Oil Co. of Nebraska	600,000	599,500
Standard Oil Co. of New York	15,000,000	15,000,000
Standard Oil Co. of Ohio	3,500,000	3,499,400
Swan & Finch Co.	100,100	100,100
Union Tank Line Co.	3,500,000	3,499,400
Vacuum Oil Co.	2,500,000	2,500,000
Washington Oil Co.	100,000	71,480
Waters-Pierce Oil Co.	400,000	274,700

Of the above National Transit Company, they own or control the following:

Connecting Gas Co.	825,000	412,000
Cumberland Pipe Line Co.	1,000,000	998,500
East Ohio Gas Co.	6,000,000	5,999,500
Franklin Pipe Line Co. Ltd.	50,000	19,500
Prairie Oil and Gas Co.	10,000,000	9,999,500

Also named in the monopoly in addition to the above was John D. Rockefeller, William Rockefeller, Henry H. Rogers, Henry M. Flagler, John D. Archbold,

Oliver H. Payne, and Charles M. Pratt, called the seven individual defendants, in addition to Henry C. Folger, Jr. and Calvin N. Payne, a co-partnership of Corsicana Refining Company; Manhattan Oil Co. in Indiana and Ohio; Security Oil Co. of Texas which owns a refinery at Beaumont; Standard Oil Co. of Kansas; and Washington Co.; in addition to the previous companies listed before 1906. There were also other individuals and companies listed in 1888; Elizabethport Acid Co.; Paine, Ablett & Co.; Smith's Ferry Oil Transportation Co., W. C. Andrews, J. A. Bostwick, Benjamin Brewer, D. Bushnell, Thomas C. Bushnell, Alex. Camden, Henry L. Davis, John Huntington, A. Hutchinson, Charles F. G. Heye, A. Jennings, Charles Lockhart, A.M.M. Greger, William H. Macy, William H. Macy, Jr., estate of Josiah Macy, A. Pouch, W. P. Thompson, J. J. Vandegrift, William T. Wardell, W. G. Warden, Joseph L. Warden; Warden, Frew & Co.; Louise G. Wheaten, H. M. Hannah, George W. Chapin, M. Harkness, Horace A. Pratt, Julia H. York, George H. Vilas, M. R. Keith, George F. Chester, and others who hereafter may join the Trust. Also Keystone Refining Co., Eclipse Lubricating Oil Co. (Ltd.), Germania Mining Co., Galena Farm Oil Co., H. C. Vandell & Co. (Ltd.), and any other individuals or future corporations that may join the Trust.

The first and second sections of the Sherman Antitrust Act, July 2, 1890, are as follows:

Section 1 - . Every contract, combination in the form of trust or otherwise conspiracy in restraint of trade or commerce among the several states, is hereby declared to be illegal. Every person who shall make any such contract, or engage in any such combination or conspiracy, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by fine not exceeding \$5,000, or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court.

Section 2 - Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person to monopolize, any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a misdemeanor, and on conviction thereof, shall be punished by fine not exceeding \$5,000, or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court.

The companies had 6 months to comply with the final decree.

p. 30-32. Mid-Continent Fields. Oklahoma. LeFlore County gasser.
A. J. Yoke and associates, of Fort Smith, Arkansas, drilled in a gasser of 4,000,000 cfpgpd capacity in LeFlore County, Oklahoma, near Cameron, last week. The well tests a block of 3,500 acres, all of which is under lease by the Fort Smith parties. The sand was found at a depth of 1,272 feet, the pay beginning at 1,202 feet and continuing about 50 feet. The well was shot, and the gas will be utilized by the Fort Smith Gas Company. Another test is being drilled about 2 miles east, in Section 6-7N-27E; the Yoke well being located in Section 4-7N-26E. Byllesby & Co., of Chicago, the owners of the Fort Smith Light and Traction Co., are the owners, and are also making a test about 6 miles east, in the NW 1/4 of Section 8-7N-27E. Foster, Rood & Malloy of Bartlesville, who have a big block of leases, are also drilling in the same locality.

p. 38. Caddo Gas Rights Sold. May 23. Announcement was made in New York City yesterday that Joseph H. Hoadley, who is heavily interested in Alabama iron properties, has, with St. Louis, English, and Canadian capitalists, purchased from the Busch-Everett Company of St. Louis, Mo., the right to the gas supply of the Caddo fields, in Louisiana, and has acquired the franchise controlled by Adolphus Busch and associates, of St. Louis, to furnish natural gas to New Orleans. Mr. Hoadley says that a pipe line will be constructed from the Caddo fields near Shreveport, La., to New Orleans, and that Gulfport will be supplied with natural gas within eighteen months. Originally the Busch-Everett Company intended to furnish natural gas to St. Louis, but the distance was too great. The New Orleans pipe line will be 318 miles long. The Busch-Everett Company controls 300,000 acres of land in the Caddo fields. Mr. Hoadley has interested several

St. Louis capitalists in his Alabama properties. He will be in St. Louis soon, accompanied by his English and Canadian associate, and the party will go on an inspection trip in Alabama and Louisiana.

Vol. 9, No. 51, June 1, 1911, p. 1. Central Fuel Oil Company disconnected its lines to The Texas Company lines, stating that The Texas Company owes them \$300,000 for 700,000 barrels of oil that Central delivered, and that Central loaned The Texas Company \$1,200,000 to build the lines, and has not been paid, and that the Southern Pacific Railroad has not taken the fuel oil that they contracted for. The Texas Company claimed that they spent \$1,000,000 of their own money for the pipe lines, and that Central owes them \$70,000 a month for use of the lines of the Texas Company. About 39,000 acres of land is involved, with production of about 7,000 barrels a day, from 700 wells, or an average of 10 barrels per well a day. Central has to increase its production to 18,000 barrels a day to meet contract quotas.

p. 4. Little Flights. (p. 2, 4). While the trust-busting season is on, the government officials should get busy on the right-leaders - the bank trust. If some of the clearing houses are not conspiracies in restraint of trade - with no "reasonable qualification" - we miss our guess.

p. 4. Trade Notes. (p. 4, 6). The 101 Ranch in Oklahoma, a corporation owned by the Miller Brothers, has published notice of dissolution, at the same time the Bliss Oil and Gas Company and the Bliss Townsite Company were going out of business. The 101 Ranch will be operated under the firm name of Miller Brothers, while the other two companies, owned by the same parties, have outlived their usefulness and will cease to exist. The Miller Brothers are the owners of the ranch - the second largest in the state - and also have a show by that name.

p. 6. Personal Mention. Arthur F. Dupont, auditor for the E. I. Dupont Nemours Company, nitroglycerin department, is in Oklahoma checking on the various stations of the company. Tulsa was recently made headquarters for all the oil field work west of Pittsburgh, Pa., with R. P. Barton general manager and Frank Wentworth office manager.

J. H. Evans, Colonel Hirsch, John Roy, and Gardner Steel have returned from a prospecting tour of Northwest Texas, around Electra and Vernon. They are somewhat divided in opinion regarding the new oil field, especially as to the extent of territory likely to prove productive. J. K. Ronne has been there for several months. The Producers Oil Company and the Corsicana Petroleum Company have big blocks of territory under lease there, particularly the Producers Oil Company, one lease containing 280,000 acres, and several counties are pretty well leased up along the probable belt, especially to the north of the Electra well, everything being taken between the well and the Red River. John Roy has a well drilling there. "Heck" Gilchrist, of Indianapolis, who secured several thousand acres there some years ago, has shipped two strings of tools there from Illinois, and will do some prospect work. Clay, Wilbarger, Wichita, Callahan, Shackelford, and adjoining counties are just now attracting about as much attention from the oil country talent as any place.

p. 10. Mid-Continent Fields, Oklahoma. (p. 10,12). Several tests are drilling in the western and southwestern part of Pittsburg County, west of McAlester, with one failure just completed at Quinton. The Test Oil Company is 1,000 feet deep in Section 26, T. 5 N., R. 12 E.

Two tests are drilling at Madill, with a dry one just completed at Woodville in the same country.

Near Spiro and Poteau, Bartlesville and Fort Smith parties are drilling for gas in Leflore County, and several fair gassers have been secured.

A test will be drilled three miles west of Kinta.

The Wagoner Field. Dr. Gammon's third well on the Thielker Land, or Julia Green allotment, Section 36-18N-17E, about 3 miles northwest of Wagoner, had 25 feet of sand and was shot in a big hole with 180 quarts. The first 24 hours production was 80 bbls. of 42 gravity oil at 270 feet deep. Half a dozen wells are drilling in an area of five miles. There is a long stretch of county in Ranges 17-18 East and Townships 14-25 North that carries several shallow sands in which good showings have been obtained.

p. 16. Will bar Standard. Subsidiary companies cannot file leases on Indian Lands. Subsidiaries of the Standard Oil Company will not be able to lease any more Oklahoma oil lands belonging to the Five Civilized Tribes, until the recent decree is put into effect, according to Secretary Fisher of the Department of the Interior. Old producing oil however can be sold by the subsidiaries because it would be harmful to shut down these flowing wells, and would be harmful to the land owners.

Vol. 9, No. 52, June 8, 1911, p. 2. Little Flights. Judge Gary, of the steel trust, has apparently convinced the investigating committee and the Department of Justice that his business is a philanthropic and educational institution, and not an industrial and commercial corporation operated for personal profit. He convinced President Roosevelt several years ago, and escaped the small embarrassments that overtook several other concerns. The sugar trust likewise exercised such persuasive methods that it is looked upon by Mr. Wickersham and his colleagues as an institution of benevolent assimilation, and Mr. Wickersham ought to know, for he has a lot of sugar stock and was the company's confidential adjustor before his services were sought as a cabinet officer. The "rule of reason" is working nicely.

p. 24. New Incorporations. The London Consolidated Oil Company, of Tulsa, Oklahoma, has been incorporated for \$500,000, by C. W. Deming, D.C. Acosta, and H. J. Rickabaugh, all of Tulsa.

The Gasoline Refining Company, of Muskogee, Oklahoma, has been incorporated for \$12,000, by E. R. Perry, of Tulsa, H. C. Lette and A. J. Vaughn, of Muskogee, Oklahoma.

The Geyser Oil and Development Company, of Davidson, Oklahoma, has been incorporated for \$20,000, by J. M. Hickerson, J. L. Franklin, S. P. Anthony, J. M. Hanrick, E. M. Basinger, D. C. Campbell, and J. M. Hair, all of Davidson.

Vol. 10, No. 1, June 15, 1911, p. 8. Trade Notes. The Magnolia Petroleum Company, which was recently organized with headquarters at Galveston, Texas, has purchased property at the northwest corner of Twelfth Street and A Avenue, and will improve the location by the erection of a modern oil plant. The property was purchased from John Sealy & Co., for a consideration of \$10,000. The company recently purchased the interests of Sealy & Co., and took over the refineries at Corsicana and Beaumont, Texas.

p. 8. Personal Mention. (p. 8, 10). W. S. Mowris has been at Electra, Texas, where he is drilling a well in partnership with John Roy. They all come back from that region with faces as red as boiled lobster, sand storms having been prevalent there.

H. F. Sinclair has returned to his home in Independence, Kansas, after a ten-day trip, hobnobbing with the politicians in Washington, D.C. While there, he was the guest of Congressman Phillip C. Campbell, of Pittsburg, Kansas, and called on President Taft.

p. 10. Kansas bars Standard. The Kansas Supreme Court handed down a decision against Standard Oil Company of Indiana, Standard Oil Company of Kansas, and the Prairie Oil and Gas Company, prohibiting them from combining to stifle competition in Kansas. Each company was chartered to procure, purchase, produce, refine, and market oil, but no one of them has been doing all of these things, but

instead each has been working as part of a system. Prairie purchased and transported the oil, Standard of Kansas refined the oil, and Standard of Indiana marketed the final products. This was construed to be an illegal agreement, and the companies were enjoined from owning stock in each other's company, and were enjoined from selling petroleum or petroleum products cheaper in one part of the state from another part, and restrained from selling oil of the same quality and value under different brands or trade names.

p. 12. Mid-Continent Fields, Oklahoma. (p. 12-14). Gasser at Ponca City. A 10 million cfbpd gasser is reported at Ponca City. According to reports from there, a well has been drilled in, but as to its production or capacity, there is no certainty. Every once in a while, Ponca City is boomed, and an investigation brings forth the information that it is principally hot air. It is probably the case this time.

p. 21. Natural Gasoline Notes. The Blair Oil and Refining Company, of Muskogee, Oklahoma, has a very successful gasoline plant on one of its leases three miles west of that city. The plant can handle 380,000 cfbpd, producing 50 gallons of 97 degree gravity gasoline an hour, and in cool weather 75 gallons.

The D. W. Franchot & Co. plant at Kiefer, Oklahoma, operates on production from 22 wells, and ships to Neodesha, Kansas, via tank cars of 7,800 gallons capacity.

F. C. Henderson, principal owner of The Superior Oil and Gas Company, at Alluwe, Oklahoma, shallow sand district, is just beginning the operation of his gasoline plant. This company has 180 producing oil wells, with 20 miles of pipe lines, and trucks the final product to the Cudahy Refining Company at Coffeyville, Kansas, about 30 miles away. Everything has been designed by Mr. Henderson, and Mr. Isom, manager fee the Cudahy company.

Royalty interests now include casing-head gasoline.

p. 24. Natural Gas for Enid. By a vote of 575 to 64, Enid, Oklahoma, voted to grant the Southwestern Gas Company, of Ponca City, a franchise to furnish the town with natural gas from its wells near Ponca City. Under the terms of the franchise, the company is to furnish natural gas in Enid at 35 cents per 1,000 cubic feet within 18 months, or the franchise is void. In the event that the natural gas supply diminishes to such an extent that the towns cannot be supplied, artificial gas will be furnished at \$1 per 1,000 cubic feet.

p. 39. Oklahoma wells completed and drilling. (p. 37-39). Miscellaneous completions. 5 wells.

Alva,	Local Co. No. 1	gas
Hodgens,	J. W. Hamilton No. 1, Heavener.	dry
Sec. 4-7N-26E,	A. J. Yoke & Co., No. 1 Cameron	gas
Sec. 6-7N-19E,	Quinton, Ninety-Sixth Meridian Co. No. 1 Appleton.	dry
Sec. 12-9N-24E,	Rood & Malloy No. 2	gas

Vol. 10, No. 2, June 22, 1911, p. 2. Trade Notes. (p. 2-3). The Texas Company has secured the approval by the Secretary of State of Texas of sixty certified copies of its articles of incorporation to enable its operation in every state in the nation and foreign countries.

A mortgage was filed for record in the county clerk's office at Beaumont by The Magnolia Petroleum Company to the Columbia Trust Company of New York, to secure bonds in the sum of \$3,000,000. The bonds are in the sum of \$1,000 or multiple thereof, and are due April 24, 1936. The Magnolia Petroleum Company is the successor of the Security Oil Company of Beaumont and the Navaho Refining Company of Corsicana, both of which were ejected from the State for the violation of the anti-trust laws, and when sold by the State's receiver, were purchased by the John Sealy Company of Galveston, and subsequently passed to The Magnolia Petroleum Company.

p. 4. Personal Mention. (p. 3-4). A. P. Dyke, of Hope, Arkansas, was a St. Louis visitor this week, after a trip to Illinois, where he was looking up some drilling tools. Mr. Dyke has been interested in the possible development of oil property in Arkansas for a number of years, and has faith in the prospects for that state. At present, he is working with V. B. Wilson, president of the First National Bank, Stromsburg, Nebraska, and associates, on a well at Gurdon. They drilled 1,100 feet with a rotary, but have decided to add cable tools, and will make such arrangements at once.

p. 4. In the Courts. The United States Circuit Court, at Wilmington, Delaware, Wednesday, handed down a decision declaring the powder trust, dominated by E. I. Dupont De Nemours Company, a combination in restraint of interstate commerce. On October 16, a hearing will be held to consider a plan for dissolving the combination. The court took into consideration the fact that the government is buying military and ordnance powders and explosives for use in Panama from the trust, and for this reason would delay dissolution until the companies affairs can be arranged.

p. 8. Producer near Ponca City. June 22. A rush of oil men to Ponca City today is occasioned by the show of oil in the 101 Ranch Oil Company's No. 12 on the big lease. The company has secured some gas, but this is the first well to make any showing as an oil producer. It has already made two flows, and will be drilled deeper today, when something more definite will be known.

The 101 Ranch Company has 150,000 acres under lease in this vicinity, and a small producer will undoubtedly start considerable work.

Ponca City is almost due west of Pawhuska, on the Oklahoma main line of the Santa Fe.

p. 14. New Incorporations. The Red River Oil and Gas Company, of Bowie, Texas, has been incorporated with a capital stock of \$32,000.

The Nash Oil and Gas Company, of Texarkana, Texas, has been incorporated, with a capital stock of \$4,000.

The Bryan Oil and Gas Company, of Bryan, Texas, has been incorporated for \$20,000, by A. A. Snell, J. K. Parker, J. W. Deemus, and associates.

The Verlie Oil Company, of Tulsa, Oklahoma, has been incorporated for \$15,000, by R. J. Allison, L. C. Hivick, and B. L. Baldwin.

The Fort Worth Oil and Development Company, of Fort Worth, Texas, has been incorporated for \$30,000, by B. F. Allen, Jr., J.B. Hagler, and Clifford C. Beckham.

p. 26-30. Petroleum and Natural Gas in West Virginia, by I. C. White, State Geologist. Historical background. The date of the first use of petroleum or its residual products, pitch and asphaltum, precedes authentic history. Probably the first recorded utilization is that in the 11th Chapter of Genesis, in which it is stated that the soft or semi-fluid bitumen found in the valley of the Euphrates, and translated "slime", was used as a mortar in the building of Babylon, more than 40 centuries ago. Erastothenes, a celebrated Grecian writer who lived in the 3rd Century B.C., has described this bitumen from the Springs of Hit on the Euphrates, and has also told of its use in the construction of mosaics, pavements, etc., in the beautiful palaces and temples of ancient Ninevah and Babylon.

Herodotus, the father of history, who lived in the 5th Century B.C., or nearly 2,400 years ago, has told us in his inimitable style, how asphaltic oil was procured in his day, from a lake on the Island of Zante, in the Mediterranean off the coast of Greece, by swabbing it up with a branch of myrtle, very much like the early settlers of the Allegheny and Little Kanawha valleys of Pennsylvania and West Virginia collected petroleum from the surface of water with woolen cloths, so that in the primitive methods of procuring mineral oil, there is apparently "nothing new under the sun". Aristotle, who lived in the 4th Century B.C., describes the deposits of bitumen in Albania along the eastern shores of the Adriatic Sea, while Pliny and Dinecorides, who lived in the First Century of the Christian

Era, have given an account of the oil springs of the Island of Sicily, and the use of petroleum in lamps under the name of "Sicilian Oil". Many ancient writers and travelers, like Plutarch, Strabo, Marco Polo, and others have recorded the use of "rock oil" and pitch in Arabia, Persia, India, and elsewhere, from the earliest historic periods.

One of the nearly extinct religious cults, that of the Fire Worshipers, or Parsees, was founded upon the mystery which the priesthood of that religion threw around the perpetual fire maintained on the altars of their temples with natural gas. When your speaker visited Baku, Russia, on the shore of the Caspian Sea in 1897, he saw the ruins of one of those mystic shrines, the last of whose priests had disappeared only 20 odd years before. In dismantling the altar of this ancient structure, it was discovered that it had been built over a fissure in the earth, from which natural gas issues, and that a secret pipe conducted the gas from the fissure to the altar, where its lambent flames had inspired the Fire Worshipers with a belief in the supernatural powers of the priests of Zoroaster. It is possible that similar tricks of deception have been imposed upon the credulity of mankind during the childhood of the race, in the establishment of other primitive religious beliefs. In China, crude methods of using natural gas were practiced more than 2,000 years ago, while the Japanese have also collected and utilized mineral oil for many hundreds of years.

Hence we find that the oil and gas seepings, welling up through fissures in the earth's stratified crust, were both observed and used by primitive peoples of most every country.

The earliest written account of the occurrence of petroleum in America is apparently that of a Jesuit missionary who came from Canada into New York in 1629, and wrote a letter concerning it, which was published in Sagard's "History of Canada" in 1632.

The petroleum seepings on Oil Creek, in Pennsylvania, and on Hughes and Little Kanawha Rivers, in what is now West Virginia, were doubtless known and used by the Indians, long before white men visited the regions, or Columbus landed in America. The earliest published account of the oil springs near Titusville, Pennsylvania, appears to be that of a Swedish traveler, Peter Kalm, about 1750, while those of Wirt and Ritchie Counties, of West Virginia, as well as similar seepings on the Big and Little Muskingum Rivers of Ohio, were first described by Dr. S. P. Hildreth, of Marietta, Ohio, in an article published in "The American Journal of Science and Arts," New Haven, Connecticut, for February 1826. In speaking of the flows of petroleum from the salt wells of the Little Muskingum, which interfered seriously with salt production, he says: "Petroleum affords considerable profit, and is beginning to be in demand for lamps, in workshops, and manufactories. It affords a clear, brisk light when burnt this way, and will be a valuable article for lighting the street lamps in the future cities of Ohio."

Pennsylvania is generally given the credit for originating the petroleum industry, because it was on the Watson Flats near Titusville, that the first well was purposely drilled for petroleum and completed August 28th, 1859, by Colonel Drake, but in Volume I of the West Virginia Geological Survey, your speaker has shown in extracts from the books of Bosworth, Wells & Co. of Parkersburg and Marietta, that a large commercial business in the purpose and sale of petroleum by this firm had been carried on as early as in the 1840's. Also, that casing, jars, and drilling tools generally had all been invented by citizens of West Virginia a half century before Colonel Drake completed the historic well on the banks of Oil Creek, and hence the credit for originating the great petroleum industry should at least be shared by Pennsylvania with her adjoining sister.

In discovering and utilizing natural gas, West Virginia clearly has precedence over Pennsylvania, for probably the first recorded reference to this valuable fluid in the United States was made as early as 1775 by Gen. Washington, who pre-empted the land around the "burning spring," nine miles above Charleston, in the Great Kanawha Valley which he described as "A bituminous spring of so inflammable a nature as to burst forth as freely as spirits and is nearly as difficult to extinguish." It is also well known that the first use of natural gas for manufacturing purposes in America was by Mr. William Tompkins, in the same Kanawha

Valley, who in 1841 struck a large flow of gas in boring a salt well only a few hundred feet distant from the "burning spring" that Washington had noted 66 years before, and piping the gas to his salt works, used it instead of coal in boiling down the brines, displacing several hundred bushels of coal daily.

Modesty forbids any extended comment on the part which West Virginia has taken in developing and making known to the oil and gas world, a scientific method of locating oil and gas territory, for although the anticlinal theory had been discovered and announced by Hunt, Andrews, Hoefler, and others, a quarter of a century before, your speaker, in connection with Mr. Earseman of the Forest Oil Company, rediscovered its truths, it remained in the "dead letter" office of untested theories until it was taken up and vitalized for all time, through the efforts of a West Virginian, in its successful application to the discovery of new gas and oil pools. Indeed, to such a low esteem had the efforts of scientific men to aid the drill in finding petroleum and natural gas fallen previous to the reannouncement of the "anticlinal theory", in the issue of "Science", for June 26, 1885, and the successful demonstration of its great value as an aid to the oil and gas industries, that one prominent operator, disgusted at frequent failures of geologists to locate productive oil pools for him, was led to remark that if he desired to be absolutely sure of getting a dry hole, he would hire a geologist to make his location. Now, however, the only unfortunate ones are those operators who neglect to study rock structure or the dip and strike of the stratified measures as taught by the anticlinal theory.

In the year 1893, just after the oil and gas fields of West Virginia had been developed in the northern end of the state, your speaker predicted that the fields would extend entirely across the state. The West Virginia Coal, Oil, and Gas Map, exhibited here, shows how this prediction has been fulfilled, and also how the structural theory of oil and gas has been verified.

Vol. 10, No. 3, June 29, 1911, p. 14. Mid-Continent. Oklahoma. (p. 14, 16-17). Ponca City well attracts large crowd. June 27. One of the quietest weeks in the history of Oklahoma has just passed. There is a scarcity of wildcatting, and so far as any chance of any new pool being opened, there seems to be nothing of the sort available. The Ponca City well. The main attraction of the week was the drilling in of the 101 Ranch Oil Company's well at Ponca City. Operators from all parts of the field flocked to the town, and it took on a lively aspect. It is impossible to determine the true worth of the well, as it is being drilled deeper. At a depth of 1,525 feet, a thin pay sand was encountered, and the well has flowed twice daily since then. A week ago today, it was turned into a tank and flowed 30 barrels. Some believe that it is an edge well, while others are of the opinion that it is a freak.

Indications are favorable for opening up something in that locality, as a number of wells have been drilled and the formations are regular. This is the 9th well drilled by the 101 Ranch Oil Company in the past two years, and the same formations have been encountered. The first well was drilled to a depth of 2,600 feet, with no showing. The sand which was found in the first well is the same as that found in No. 9, but it was dry.

W. H. McFadden and E. R. Marland, of Pittsburgh, Pennsylvania, have been drilling around Ponca City for 2 years, and although the results have not been any too encouraging, they have stuck at the task. They drilled the first well on the Miller Bros. property, the owners of the 101 Ranch, which was dry. They then moved 2 miles north and 1 mile east to Section 9-25N-2E, where they drilled a gasser. Another location was drilled in Section 8-25N-2E, and at a depth of 1,320 feet a good gasser was obtained.

The fourth well was drilled to a depth of 1,062 feet and was dry. In the 5th well, a duster was also obtained at 1,180 feet. The well was located in the NW 1/4 Section 16-25N-2E. Another was drilled in Section 4-25N-1E, and it was dry at 1,436 feet. A small showing was obtained at a little over 1,000 feet. They drilled into the 1,400-foot sand and quit when water was found. No. 8, in the SW 1/4 Section 18-26N-3E is still drilling at 1,850 feet, with water in the 1,400-foot sand, and the gas sands regular, as in the other wells. They will drill

this test to 2,600 feet, if a well is not obtained before that depth is reached.

No. 9, which started the boom, is located along the foothills, and the topographical features are promising for a little production. Locations have been made for three other tests to be drilled in the near future. The locations are to the southwest, one directly east, and one north, and northeast. They are rigging up one well, building a rig for another, and ready for the machine for the third.

The formations in No. 9 corresponded to those in the other wells, and it is the only well drilled below the 1,400-foot sand where water was found, with the exception of the well on the Miller Bros.' Ranch. When they got water in the 1,400-foot sand, they decided to drill a little deeper, and cased off the water. At 1,500 feet, the hole caved, and they put in more casing. At 1,525 feet, a showing of oil was had. Drilling was stopped and the casing pulled on Tuesday of last week. The well made two flows on the Sunday previous, and made from two to three flows every day when the tools were taken out of the hole. The oil is light, testing about 43 gravity.

The gas proposition. Gas is found at various depths around Ponca City, and even though the wells do not make good oil producers, the gas will attract attention. It costs little to drill the wells, and with the decline in other parts of the field, the opportunity for gas production looks inviting. The 101 Ranch Company has the franchise for furnishing Enid and Tonkawa, and will develop the field for that purpose if nothing else. It is found at 500 and 900 feet, and at the lower depth of 1,300 feet. If a gasser of 8,000,000 feet capacity can be developed at 500 feet, it looks like a good proposition.

Nicely located. Ponca City is located in an ideal country. The roads are good, the water is the best the country affords, and it is the center of a rich farming community. The town is 36 miles south of Arkansas City, directly west of Pawhuska, and the Arkansas River separates it from the Osage Nation. It is on the main line of the Santa Fe Railroad to Oklahoma City and the South.

A crowd from Tulsa. Among those who went over to witness the bringing in of the well were R. S. Murdock, of the Texas Company; R. S. Gray, of The Prairie Oil and Gas Company; A. L. Braymer, of The Gypsy Oil Company; Murray Doan, of The Gulf Pipe Line Company; B. H. Griffith, of The Oil Well Supply Company; Hugh King, Jr., of the Devonian Oil Company; W. A. Black, of The Producers Oil Company; George Henry, of The Henry Gas Company; C. E. Ranney, of The Bessemer Gas Engine Company; W. L. Crawley, of The Gulf Pipe Line Company; R. E. Hileman, of The Franklin Oil and Gas Company; W. P. Thompson, V. H. Waldo, Ross Eaton, and Thomas White. The visitors were royally entertained at the 101 Ranch, where a picture show was put on, and refreshments served for their benefit. The ranch is one of the largest in the country, and has all the modern improvements.

The drilling company. The 101 Ranch Oil Company is an Arizona Corporation, organized at Pittsburgh, Pennsylvania. It is named after the 101 Ranch, owing to the fact that the first well was drilled on the property. The company has a lease on 90,000 acres of the ranch. Its leases extend miles over Kay County, and embraces about 150,000 acres. The land will be subleased. As it is not within the jurisdiction of the Department of the Interior, the proposition looks more favorable.

The Ponca City Oil and Gas Company has drilled about 70 wells in the country, and has supplied the city for a number of years. They are shallow wells and do not hold up, but the expense of drilling is small, and others are put down to replace them.

The Ladow Gas Company is drilling at Kildare, north of Ponca City, at 1,700 feet. The well is shut down, with a dose of water waiting for 4-7/8" casing.

p. 14. James K. Duffy, representing the Harmon-Graham syndicate, which purchased the Page properties a few weeks ago, is in Tulsa, and has announced that his company will begin the construction of a refinery at Sand Springs within the next few weeks. The Page property has 45 producing wells, and the company will take care of its own production. The capacity of the new refinery will be 2,000 barrels a day. Charles Page has built his Orphans' Home at Sand Springs, and the

manufacturing industries make it look as if some day it may be quite a town.

p. 16. Display of talent at Ponca City - June 27, 1911 - drilling in well on Brett Farm. (picture of 18 dignitaries.)

p. 22. New Incorporations. The Continental Oil Company of Columbus, Ohio, has increased its capital stock from \$30,000 to \$60,000.

The Natural Gas Supply Company, of Little Rock, Arkansas, has been incorporated for \$25,000 by W. M. Kavanaugh, C. H. Duttlinger, and E. C. Campbell.

The Bowen Oil Company, of Navasoto, Texas, has been incorporated for \$10,000, by T. E. Bowen, Joel Terrell, C. C. Camp, Ed Woodward, and W. M. Woodward.

The Heavener Oil and Gas Company, of Heavener, Oklahoma, has been incorporated for \$20,000, by James A. Murdock, J. W. Brewer, Oliver Layne, and Samuel R. Wilson, all of Heavener, and Oreb Beardsley, of McCurdy, West Virginia.

Vol. 10, No. 4, July 6, 1911, p. 8. Personal Mention (p. 6, 8). W. G. Skelly, of the firm of Selby, Cisler and Skelly, has practically given up his residence in the Illinois field, and is looking for new realms of activity. Mr. Skelly came west from Pennsylvania and has made good in Illinois. He will store his household goods in St. Louis, and while the family sojourns in the north, will look over Texas and possibly Mexico.

p. 12. Mid-Continent Fields. Oklahoma. (p. 12, 14). Ponca City well. The well of the 101 Ranch Oil Company, which was drilled in a short time ago, and which caused lessors to flock to Ponca City, was put to pumping a few days ago, and is making about 30 barrels a day. The same company has started work on two other wells, one a location to the west, and the other a half mile north. They should be drilled in within two weeks if no bad luck is encountered.

Vol. 10, No. 5, July 13, 1911, p. 8. Personal Mention. (p. 6, 8). Mrs. Kathleen Garrison, widow of Sheriff Garrison, who was killed at Oklahoma City, is visiting her daughter in St. Louis. Mrs. Garrison is very deeply interested in the oil business, and is as active in securing leases in new territory as any scout in the game. She has leased a large tract of land in southern Oklahoma, midway between Davis, on the Santa Fe, and Duncan, on the Rock Island. She organized the Garrison Oil Company, and has secured three partners who will finance the deal. If confidence and business ability would get oil, Mrs. Garrison should make a success of the business.

Max Elser, of Fort Worth, Texas, chief booster for the Putnam Oil Field that is to be, was a St. Louis visitor this week. Mr. Elser has taken up a large acreage in Shackelford and Callahan Counties, and formed the Fort Worth-Putnam Oil Company, which is preparing to drill a well near Putnam. There is a shallow gas well which has been making some gas for ten months from 170 feet, and various indications lead the promoters of the company to think that they will be repaid for drilling. Two wells have been drilled near Moran, north of Putnam, and one is drilling near Albany, in Shackelford County. The Texas Company, through its oil and gas producing companies, has an immense acreage leased in that vicinity.

p. 8. American Companies Consolidated. The following companies have been converted into a French limited company, with headquarters in Paris: the Oklahoma Petroleum Company, the Union Petroleum Company, the Tulsa Petroleum Company, and the Premier Petroleum Company, of Oklahoma, together with the Fulton Oil Company, Illinois, and the Wichita Oil and Gas Company, of Nevada, and the Robinson Leases in the vicinity of the Glenn Pool. The capital is \$5,000,000, while 7% preference shares are \$3,000,000.

p. 30. New Incorporations. The Okmulgee Refining company, of Okmulgee, Oklahoma, has reduced its capital from \$150,000 to \$75,000.

The Dutcher Oil, Gas and Mineral Company, of Sapulpa, Oklahoma, has reduced its capital stock from \$100,000 to \$10,000.

The Konawa Oil and Gas Company, of Konawa, Oklahoma, has been incorporated for \$35,000, by W. S. Lowe, George M. Swift, and A. J. Lowe, all of McAlester, Oklahoma.

The Equitable Oil Company, of Bartlesville, Oklahoma, has been incorporated for \$35,000, by C. A. Coulin, Flora D. Armstrong, and A. T. Dumneil, all of Bartlesville.

The Fort Worth Oil and Development Company, of Fort Worth, Texas, has been incorporated, with a capital stock of \$30,000, by B. F. Allen, Jr., J. B. H. Hagler, and Clifford G. Beckham.

p. 39-40. Oklahoma. Wells Completed and Drilling. (p. 38-40).
Completions.
 Ponca City District, Sec. 8-25N-2E, 101 Ranch Oil Co. No. 1, Brett 25
 McAlester, Sec. 26-5N-12E Test Oil Co. No. 1 dry
Drilling.

Ponca City District.
 Sec. 8-25N-2E, 101 Ranch Oil Co. No. 2 Brett drilling
 Sec. 8-25N-2E, 101 Ranch Oil Co. No. 1 Brett drilling
 Sec. 5-25N-2E, 101 Ranch Oil Co. No. 1 Brett drilling
 Sec. 18-26N-3E, 101 Ranch Oil Co. No. 1 Lewis drilling
 Kildare, Ladow Gas Co. No. 1 drilling
Miscellaneous. 13 wells drilling.
 Alva, Local Co. No. 1 drilling
 Guthrie, Local Co. No. 1 drilling
 Kinta, Ninety-sixth Meridian Oil Co. No. 1 drilling
 Lawton, Local Co. No. 1 drilling
 Oklahoma City, Local Co. No. 1 drilling
 Ryan, Jefferson Co. Local Co. No. 1 drilling
 Woodville, Marshall Co. Local Co. No. 1 drilling
 Sec. 8 -10N-8E,? Inola Beatty & Co. No. 1 (19N-17E?) drilling
 Sec. 8 - 7N-27E, Fort Smith Traction Co. No. 1 drilling
 Sec. 36-8N-26E Fort Smith Traction Co. No. 1 drilling
 Sec. 21-7N-26E Fort Smith Local Co. No.1 drilling
 Sec. 26-5N-12E, McAlester Test Oil Co. No. 2 drilling
 Sec. 28-3S-11E, Atoka Local Co. No. 1 drilling

Vol. 10, No. 6, July 20, 1911, p. 2. Probe of all pipe lines ordered. July 18.
Washington, D.C. The Interstate Commerce Commission has ordered an investigation of the pipe line business of the country, and has made more than sixty individuals and companies defendants in the action which it has brought. According to the order of the Commission, complaints have been received by it from various parties, protesting that the rates and regulations for use of pipe lines are unreasonable and discriminatory. It is not upon any formal complaint that the body acts, however. It acts upon its own motion, and refuses to disclose the source of the protests which have come to it. The decision was made on June 8, 1911. More than half of the companies named are subsidiaries of the Standard Oil Company. The following companies were named:
 The Buckeye Pipe Line Co. Producers Oil Co., Ltd.
 The Columbia Pipe Line Co. Pure Oil Co.
 The Crescent Pipe Line Co., Inc. South West Pennsylvania Pipe Lines
 Cumberland Pipe Line Co., Inc. Southern Pipe Line Co.
 Emery Pipe Line Co. The Texas Co.
 The Eureka Pipe Line Co. United States Pipe Line Co.
 Gulf Pipe Line Co. Acme Oil Co.
 Gulf Pipe Line Co. of Oklahoma Anchor Oil and Gas Co.
 Higgins Oil and Fuel Co. Associated Oil Co.
 Indiana Pipe Line Co. Associated Pipe Line Co.
 National Transit Co. Central Oil Co. of Los Angeles
 New York Transit Co. Cornplanter Refining Co.
 Northern Pipe Line Co. Corsicana Refining Co.
 Producers and Refiners Oil Co., Ltd. Dougherty and Son Refining Co., W.H.

Evangeline Oil Co.	Rio Bravo Oil Co.
Franklin Pipe Line Co.	Security Oil Co.
Guffey Petroleum Co., J.M.	Standard Oil Co. of California
Gulf Refining Co. of Louisiana	Standard Oil Co. of Kansas
Industrial Pipe Line Co.	Standard Oil Co. of Louisiana
Kansas Co-Operative Refining Co.	Sun Company
Kansas Crude Oil and Gas Co.	Sun Pipe Line Co.
Kansas Natural Gas, Oil and Pipe Line Improvement Co.	Tidewater Oil and Pipe Co.
Kasigan Oil, Gas and Power Co.	Tidewater Pipe Co., Ltd.
Manhattan Oil Co.	Uncle Sam Oil Co.
The Modelo Oil Co.	Uncle Sam Oil Co. of Kansas
National Pipe Line Co.	Union Oil Co. of California
National Refining Co.	The Union Petroleum Co. of Philadelphia
The Ohio Oil Co.	Union Pipe Line Co.
Paragon Refining Co.	Vacuum Oil Co.
Prairie Oil and Gas Co.	Wellsville Refining Co.
Puente Oil Co.	

p. 2-3. Agreement on tax rate. The State Board of Equalization of Oklahoma reached an agreement with two pipe line companies on assessment values. The Prairie Oil and Gas Company will be assessed \$20,825,000, and Gulf Pipe Line Company \$3,100,000. The Texas Co. is still in litigation, along with Kansas Natural Gas Co., and Indian Territory Illuminating Oil Co.

p. 3. New rates on oil. The Oklahoma Corporation Commission issued a proposed order July 12, 1911, establishing a new schedule of freight rates on petroleum and petroleum products, establishing two classifications: crude oil and refined products. A graduated scale was proposed for every 10 miles up to 500 miles. For 5 miles, the rates would be 3 cents and 4.5 cents per gallon, and 500 miles they would be 13.7 and 26 cents, figuring 7.4 pounds per gallon for crude oil and 6.6 pounds per gallon for refined products.

p. 3. Oil and Gas in Louisiana. Bulletin No. 429, of the United States Geological Survey, has been issued. "Oil and Gas in Louisiana" by G. D. Harris, 194 pages. Irving Perrine and W. E. Hopper did much of the work. This is a good history of the discovery and development of each field and area, including many saline formations, and is profusely illustrated, with comprehensive maps with pictures and history of the large wells.

p. 4. Trade Notes. Successful experiments in the use of crude oil in the locomotives on the Canadian Pacific Railway between Vancouver and Kamloops have decided Vice President William Whyte to recommend that use of oil for fuel for the entire distance through the mountains.

The Tageblatt, of Berlin, Germany, says the government will introduce a bill in the next Reichstag, creating an imperial monopoly in petroleum. It is alleged that the reason for this action is that the incessant cutting of prices by The Standard Oil Company threatens to cause Austrian refiners to withdraw from the German market, which would give the American combination a monopoly.

p. 12. Mid-Continent Fields, Oklahoma. (p. 10, 12). Near Ponca City. Two gassers were drilled in by the 101 Ranch Oil Company near Ponca City last week. No. 1 on the Jennie Burke Land, Section 8-25N-2E, will make 10,000,000 cfpgpd in the 500-foot sand, and No. 1 in Section 17-25N-2E will do about the same. The gas will be cased off and the wells drilled deeper. On the C. G. Crawford Land in Section 7-25N-2E, the same company is drilling at 700 feet in its second test for oil southwest of the oil well drilled in a few weeks ago. The first producer had been shut in.

p. 12. Deals in the Caddo Field. The Texas Company and Caddo Gas and Oil

Company representatives are meeting in Chicago, for the purpose of The Texas Company to buy the holdings of the Caddo Company. The Caddo Company is one of the oldest companies in the field, succeeding the Citizens Oil and Pipe Line Company, the pioneer in the field. The Caddo Company, managed by S. S. Hunter, is controlled by the Dawes interests, and is at present drilling for oil and gas and is piping gas to Shreveport, Texarkana, and Marshall, and has oil interests in the Vivian Field, with 750 to 1,000 barrels of oil per day production.

On Saturday, the representatives of the Gulf Refining Company met with Mr. Denning, president of the Busch-Everett Company, to run the Busch oil from their Hosston Field. It was rumored that the Arkansas Gas Company might be interested in the gas of the Busch-Everett holdings, amounting to 500,000,000 to 1,000,000,000 cfcpd, and shut in, waiting on deals with St. Louis and New Orleans, which fell through. Other deals for this gas to Houston and Memphis are also being considered. The Busch-Everett people have about 4,000 barrels of oil per day production also, mainly from the Hosston and Vivian Fields. Much of the oil is heavy, and there is no ready market for it because of oversupply elsewhere.

Vol. 10, No. 7, July 27, 1911, p. 2. Tariff not forthcoming. In the interest of oil producers in securing a tariff on the importation of crude oil into the United States from foreign countries, George W. Newman, of Beaumont, Texas, after a visit to Washington, D.C., has returned to his home, stating that he is convinced that no legislation can be secured at this session of Congress. He interviewed Senator Joe Bailey and Chairman Underwood of the Ways and Means Committee, and found out that Congress was too busy, being anxious to adjourn. Oil men want protection from cheap Mexican oil.

p. 2. Leases subject to taxation. Assistant Attorney General Whitehall, of Texas, in an opinion to County Judge Wilson, of Marion County, holds that oil and gas leases are taxable, with the grantee being conveyed a type of interest in real estate of which minerals and oil and gas are a part. This new ruling opens discussions in the leasing game.

p. 10, 18-21. Lander and Salt Creek Oil Fields of Wyoming. Bulletin No. 452, of the United States Geological Survey, has just been published, by David T. Day, E. W. Hainsworth, and W. C. Knight. Before 1880, oil springs were noted in the area, and by 1884 to 1889, the first wells were drilled. From the air, one of the 4 anticlines in Salt Creek resembles a teapot, and was named the Teapot Dome, with many springs along Salt Creek being the reason for the discovery of the field.

p. 16. Electra News. The Producers Oil Company has just completed a 37,500 barrel storage tank, and the Corsicana Petroleum Company has purchased 40 acres, 3-1/2 miles north of Electra, for the purpose of erecting tanks and building an electric light plant for the field. They have a corps of men at work, surveying a line to Petrolia, which will eventually be completed to the refinery at Corsicana. The daily production of the field is about 900 barrels from four of the Producer's wells and two belonging to the Corsicana Company. Those who are now interested in the field are Barnsdall, McBride, The Pure Oil Company, M. Hirsh, Red River Oil Company, Electra Oil and Gas Company, Wichita-Wilbarger Oil Company, Guffey, Producers, Corsicana Petroleum Company, Wise, Sullivan, Mowris, The Devonian Oil Company, and others. During the past sixty days, fifteen rigs have been built, and it looks like a busy season. Putnam No. 1 is holding up nicely and making about 400 barrels a day. The development shows the field to be at least two miles in extent. A showing of oil is reported at Iowa Park, 16 miles east, and another well is reported north of Vernon, 25 miles northwest.

p. 27. New Incorporations. The Red River Oil Company, of Dallas, Texas, has been incorporated for \$50,000 by P. A. Chapman, W. K. Ward, J. A. Chapman, and E. P. Harrwell.

Vol. 10, No. 8, Aug. 3, 1911, p. 12. Modified oil decree filed. A decree modifying the original order for the dissolution of The Standard Oil Company, was filed in the United States Circuit Court of St. Louis last Saturday, allowing the Standard to dissolve within six months, confirming the Supreme Court order. June 21, 1911 was the beginning date.

Vol. 10, No. 9, Aug. 10, 1911, p. 10. Trade Notes. Salts of naptha acid, once thrown away as waste from petroleum refineries, is now being used in various industries. Chemists have discovered a means to deodorize it, and it is taking the place of tallow and vegetable oils in the making of soap, and in the textile industries. A large Baku house has introduced the naptha acid in place of oleic acid.

The Columbia Land, Oil and Gas Company has filed articles of incorporation in Arkansas, with a capital stock of \$75,000, of which \$15,000 has been fully paid in. The company owns large tracts of land in LaFayette and Columbia Counties, about 50 miles southeast of Texarkana. Drilling will be started at once. The incorporators are: William C. Guss, F. W. O'Brien, W. A. Smith, George F. Jasper, W. H. Weilknecht, and George J. Gray. The officers are George F. Jasper, president; W. C. Guss, vice-president; R. W. O'Brien, treasurer; George J. Gray, secretary; and W. A. Smith, general manager. The headquarters of the company will be at Texarkana.

p. 16. Mid-Continent Fields. Oklahoma. At Ponca City. The deep test at Ponca City, northeast of town in Section 18-26N-3E, on the Lewis Land, was abandoned at 2,280 feet. They had lots of sand, but nothing but salt water. The well was just a short distance from a number of gas wells drilled by the Ponca City Oil and Gas Company, and the same formations were encountered. They have been drilling for several months. The report that a large producer has been drilled in near the last month's producer was founded on a small showing in a well northeast of that location in Section 5-25N-2E. At 625 feet, they had a very nice showing with plenty of gas, but this was cased off and the well continued to the 1,500-foot sand. The other well made a showing of 1,525 feet, and it is expected that this next well will do more in the way of production.

Electra. Hivick & Chapman have drilled in their well at Electra, Texas, and it filled up 600 feet at 12 feet in the sand. It is shut down awaiting casing. It is a mile north of the Clayco well.

Vol. 10, No. 10, Aug. 17, 1911, p. 2. The Anticlinal theory, by Frank H. Taylor. The first person to notice the connection between petroleum and anticlines was undoubtedly General A. J. Warner, for many years a resident of Marietta, Ohio, and later of Dahlonga, Georgia, where he died last year. General Warner was wounded at Gettysburg, and afterwards represented his district in Congress, and also built the Cleveland & Marietta Railroad. He was a thorough geologist and also built the Cleveland & Marietta Railroad. He was a thorough geologist and a civil engineer. He published an article within a year after Colonel Drake's discovery. The writer had the story of the concept directly from General Warner during several years of close companionship with him.

When a youth, A. J. Warner was a student from 1842 to 1848, working on the Pennsylvania Geological Survey under Dr. Rogers. The report was published in 1852. Rogers described an important anticline in northwestern Pennsylvania in this report, but did not connect it with oil. The anticline ran from Shippen's Mills, Clarion County, southwest to Parker's Landing on the Allegheny River, beyond Bruin's Mills, Butler County. This was later known as the Great Third Sand Oil Belt, one of the most profitable oil trends for 40 years or more from 1859 onwards.

In 1860, General Warner made a general inspection trip down the Ohio River, passing St. Mary's and Eureka, West Virginia, noting a clearly marked anticline. When he reached Parkersburg, he heard that oil was discovered and being produced from Burning Springs on the Little Kanawha River. He visited there and found the wells to be on the same anticline he had previously noted at Eureka. He noted that the dry holes were not on the anticline. For four days, General Warner

walked north on foot, tracing the anticlinal axis, coming out at Eureka. Today there are wells all along this structure. He already settled in his mind the association of oil with an anticline. He visited the Drake well, and went back to Parker's Landing, and leased up a number of acres on both sides of the Allegheny River. The Civil War broke out, and he had to forget his leases.

On his return after the war, he drilled several wells on the Burning Springs Anticline, the first one at Sand Hill, which proved to be a 100 barrel a day well.

General Warner was a friend of Edward Orton, State Geologist of Ohio, and talked to him about the anticlinal theory. F. W. Minshall, of Macksburg, a well known geologist, also visited General Warner, and studied the anticlines under his suggestion. Inasmuch as General Warner made public his anticlinal theory within a year after the finding of oil by Colonel Drake on Oil Creek, it may be presumed that to him belongs the honor of the discovery.

p. 8. Recent Deaths. Major William Crawford Armor, aged 69 years, died suddenly at his home at Harrisburg, Pennsylvania, August 12, 1911. Major Armor was a resident of the oil country region for a number of years, being the inventor of the oil well packer that bore his name. He served during the Civil War as Major of the staff of John W. Geary, and after the war was private secretary to Governor Geary. In later years, he was a part owner of The Petroleum Age, published at Bradford, Pennsylvania. He was a brother of R. R. Armor, the well-known oil producer. He is survived by his widow and daughter at home, and a son, Dr. Russell Armor, of Pittsburgh, Pennsylvania.

p. 10. An opinion on Oklahoma oil, by Charles N. Gould. Charles N. Gould, director of the geological survey at Norman, Oklahoma, has issued the following estimate on the oil and gas production of that state.

"At a conservative estimate not to exceed 25% of the gas so far discovered in Oklahoma is now being utilized. Part of it is being shut in, waiting a chance for utilization, but much of it is going to waste. It must be remembered, however, that only a relatively small per cent of the oil and gas region of Oklahoma has ever been prospected, and a still larger part developed. There is enough prospective territory untouched in Oklahoma to keep the drillers busy putting down wells for the next fifty years. Counting fifty years more for the last well brought in, and assuming that the greater part of the gas will be utilized and not permitted to go to waste, we may approximate one hundred years as the life of the oil and gas fields of Oklahoma."

p. 12. Oklahoma. (p. 12, 14). With field work lagging in Oklahoma, Electra, Texas, is a more attractive spot. The Prairie Oil and Gas Company is paying 58 cents a barrel for the Electra oil. Undeveloped leases are at a premium and operators are awaiting the opening of a new pool.

Electra News. The Chapman-Hivick-McFarlin well at Electra is one of the best yet drilled in the new territory. It flows regularly every fourteen minutes for the same number of minutes, and every time the bailer is run it comes up filled with oil. The number of oil men increases at Wichita Falls every day. The last well is in the 900-foot sand and is not drilled through the pay. Only about 13 feet of pay has been drilled in, and the well is one of the best drilled in the area. A number of other wells are drilling in the vicinity of Electra. Turner Overman is drilling two wells three miles north and east of the town, both of which will be in next week. W. S. Mowris of Tulsa will reach the 900-foot sand the first of next week, in a well 7 miles west of Electra, and south of Vernon, where they had a good showing in another well not long ago. S. E. Bell, of Smethport, Pennsylvania, has a good looking lease adjoining the townsite of Electra, and will start drilling soon. A number of other locations have been made, but nothing has been done in the way of drilling them. Lease prices have gone skyward, and it is a boom place for scouts and leasers.

p. 21-22. The Electra, Texas Field. Mr. Bert Leonard, formerly of Pittsburgh, Pennsylvania but located at Wichita Falls, Texas, has given the field

careful study, being familiar with the oil business, and has written the following letter.

"The Electra Field, 26 miles from Wichita Falls, looks very promising. Oil has been found in 6 or more sands from depths of 50 to 1,900 feet. The main sands seem to lie at almost 640, 920, and 1,900 feet. The question of drilling with rotary or cable tools is not settled as yet. There is some caving. Cable tools generally have a draw outfit for handling casing. The California calf wheel is not yet in use; objection to rotary is that unless one can rely on watchfulness of driller, it is hard to tell what formation is being drilled, and whether an oil showing is worth examining or escapes notice altogether.

About 6 small tank cars go out each day, representing the production of 3 wells of the Clayco Oil Company on Woodruff Nos. 1, 2, and 3, No. 1 being the discovery well of the field, although oil had been found on the town site almost 10 years ago while drilling for water, and The Texas Company had later taken a lease on the Waggoner Ranch of over 260,000 acres and put down 8 or more wells. No. 1 of the Clayco lies about 1-1/2 miles northeast of The Texas Company's wells. It came in at 1,630 feet and flowed for months at better than 250 barrels a day, and is still doing about 200 barrels. The next well, No. 2, stopped at 640 feet and is rated at 100 barrels flowing. The Texas Company drilled the next well on the Stringer Ranch, about 700 feet west of Clayco No. 1, and at 1,580 feet reported a good well flowing, or rather spraying. Clayco No. 3 came in about 2 weeks ago at 1,900 feet, after having gone through the other sands without satisfactory results. It was considered a failure until it reached this depth. It started off at better than 1,000 barrels, and now flows steadily at 1,200 barrels per day. I believe this is the sand in which most of the old Texas wells get their oil. These old wells have not been producing much - it's hard to say whether they are good or just small wells. Sands so far reported were from 10 to 30 feet thick, so far as I can learn, and they dip north. I don't know the depth of the 1,900-foot sand.

This week a well just north of the Clayco Company is showing a lot of gas, and has already encountered oil less than 900 feet deep. To the east of the Clayco, the Gilchrist or Indiana well showed for a 50 barrel producer at 640 feet, and is now 920 feet deep, pumping and flowing 100 barrels a day. On the Stringer, The Texas Company has one or two new producers. So far the field has not been extended, but the Gilchrist well gives good encouragement. There are perhaps a dozen wells drilling, over half of them being in the same little area of developed stuff, lying along the Stringer and Woodruff line. There is one drilling almost 4 miles north of east of Electra, called the Honaker, and two almost 4 miles north of town, and one ready to start 6 or 7 miles west.

The oil is a light green, said to be 42° and better than the Bradford oil. It brings 55 cents a barrel. As prices for land go in the Mid-Continent Fields, they are high here, at \$2 per acre, and \$1 to \$2 per acre rental being paid for stuff 10 or 12 miles from the field. Oil indications are plentiful all through this stretch of country from the old Petrolia Field through north of Iowa Park to Electra, and even to Vernon. The past week has been bringing in the oil men from Illinois and Oklahoma, and the game is now on in earnest."

p. 26. Late Incorporations. The Epstein Oil Company, of Lawton, Oklahoma, has been incorporated for \$10,000, by Matt H. Beddow, W. F. Whitten, and J. R. Davis.

The Elbert Oil, Gas and Development Company, of Sapulpa, Oklahoma, has been incorporated for \$5,000, by E. C. Wallace, E. May Gordon, and H. E. Wallace, all of Sapulpa.

The Studebaker Oil and refining Company, of Wilmington, Delaware, has been incorporated for \$100,000.

p. 26. Advertisement. Pioneer Mapping Co., Heydrick & Vance, Bartlesville, Oklahoma. Up to date allotment, Township Plats, and Maps of the Cherokee and Osage Nations, showing latest Oil and Gas Developments. Description of maps furnished on application.

p. 35. Oklahoma. Completions and Drilling. (p.34-36). Drilling wells. Ponca City.

Sec. 8 -25N-2E,	101 Ranch Oil Co. No. 7 Brett	drilling
Sec. 17 - 25N-2E,	101 Ranch Oil Co. No. 1 Banning-Arien	drilling
Sec. 7 -25N-2E,	101 Ranch Oil Co. No. 1 Crawford	drilling
Sec. 18 -26N-3E,	101 Ranch Oil Co. No. 1 Lewis	drilling
Kildare,	Ladow Gas Co. No. 1	drilling
<u>Miscellaneous.</u>		
Alva,	Local Co. No. 1	drilling
Guthrie,	Local Co. No. 1	drilling
Inola, Sec. 8-10N-8E,	? Beatty & Co. No. 1 (19N-17E?)	drilling
Kinta,	Ninety-sixth Meridian Oil Co. No. 1	drilling
Lawton,	Local Co. No. 1	drilling
Oklahoma City,	Local Co. No. 1	drilling
Ryan, Jefferson Co.	Local Co. No. 1	drilling
Woodville, Marshall Co.,	Local Co. No. 1	drilling
Sec. 28-3S-11E, Atoka Co.,	Local Co. No. 1	drilling
Sec. 26-5N-12E, Mcalester,	Test Oil Co. No. 2	drilling
Sec. 21-7N-26E, Ft. Smith,	Local Co. No. 1	drilling
Sec. 8-7N-27E,	Ft. Smith Traction Co. No. 1	drilling
Sec. 36-8N-26E,	Ft. Smith Traction Co. No. 1	drilling

Vol. 10, No. 11, Aug. 24, 1911, p. 1-2. A Drake memorial Museum. A foundation has been effected for the Drake Memorial Museum and Library at Titusville, Pennsylvania, in charge of Edwin C. Bell, of that city, trustee. Ample ground has been donated, and August 27, the 52nd anniversary of the completion of the first well drilled for oil, will be observed as Donation Day. As August 27 is Sunday, the 26th and 28th will both serve for subscriptions, each subscriber to be a member of the association. The Petroleum Gazette says: "It is a strange and lamentable fact that there is no other industry so rich in material wealth or so remarkable in its history that is so poor in public or semi-public institutions, or associations typical of it, as the oil business. Its history has been written no more than in mere outline as yet, and its best literature is but fragmentary. Much of the material for this literature, which should have been preserved, has been lost, and much more of it will be lost if a co-operative effort is not made soon to preserve it.

Among the few individuals who have appreciated the future value of material of this character is Edwin C. Bell, of this city, formerly active in oil region journalism, and a writer of more than local reputation. For the greater part of the period that has passed since the striking of the Drake well, Mr. Bell, who was one of the early participants in the activities of the old days on the crick, and has resided here since that time, has been continuously a collector of books, newspapers, maps, pamphlets, documentary records, note books, memorandums, relics, and the many writings and compilations of his own from original sources, relating to the history of oil. It has been a pleasure with him to make these important collections, and it has been one of his aspirations that at some time the opportunity might be opened to him, to make them the nucleus of collections in an institution which he might create, or assist in creating, and contribute to posterity in the name of Colonel Drake and the oil industry."

Already the museum has become the custodian of a collection of more than 2,000 oil sands taken from Pennsylvania wells, drilled 20 to 40 years ago. The collection was made by the late John F. Carll, of Pleasantville, while a member of the Pennsylvania State Geological Survey. The land has been secured by Mr. R. D. Fletcher, the pioneer merchant of Titusville, Pennsylvania, whose generous deed is greatly appreciated, and whose timely aid 50 years ago gave Col. Drake the financial means to complete his well, thereby bringing into existence the petroleum industry.

p. 2-3. Conservation of Oil and Gas. Dr. David T. Day, of the United States Geological Survey, writes as follows in the Scientific American of Aug. 12, 1911, of oil and gas economics in field, factory, and home:

In regard to conservation of our natural mineral resources, the petroleum industry affords a better example of prevention of waste than has been written for other industries, considering that oil is limited in amount. The world has moved past the stage when human power is sufficient in daily labor. Aid must be had for power from a large supply of cheap fuel. In Italy, a photograph of a woman carrying on her head a large bundle of firewood, is an example of a scarce costly commodity, that could be used locally, but could not supply enough energy for manufacturing. In the United States we have at least 10 billion barrels of oil. Last year we produced 200,000,000 barrels, and \$65,000,000 of natural gas, and we had more than we needed. Producers will drill and produce as fast as they can, and not without orderly development, resulting in floods of oil at times, without a ready market, and leading to storage and waste, and boom and bust.

When the Lucas gusher broke loose near Beaumont, Texas in 1901, the oil was lost for lack of tankage, and fire added to the waste. In the opening days of the Glenn Pool in 1905, in Oklahoma, oil was wasted down the creek. These trivial amounts of waste were noted, but the operators tried to conserve all that they could. Many fields with steel storage tanks would be struck by lightning.

Oil conservation goes back before 1859, beginning with Samuel Kier, a merchant of Pittsburgh, who was an inventor or adapter of a lamp for burning oil. (In the 1840's, he had salt wells in the area, one of which struck oil, and in 1846 he sold bottles of oil as Kier's Rock Oil, selling about 240,000 bottles by 1848, for medicinal purposes. His driller, a blacksmith, had forged the tools for drilling the wells by cable tool to 400 feet deep, and was the same driller hired by Colonel Drake to drill the first oil well in 1859, named William Smith or Uncle Billy Smith). Kier added a chimney to the old oil lamps, which made the oil burn with a bright light, and was more efficient. This supplied a market which did not before exist, and which has spread from Pittsburgh to remote China. (It is estimated that only 2,000,000 oil lamps existed in 1859, in U.S.A. By 1870, almost everyone had one. John D. Rockefeller supplied 5 gallon cans of kerosene at 5 cents a gallon to the world, and the Chinese cans had printing on the sides "Oil for the Lamps of China", and these cans could be found all over China and the rest of the world where the Standard Oil Company operated). A. C. Ferris came next after Kier, with his genius for oil traffic. He began the process of exporting oil from Pittsburgh to the ends of the earth. From that day to this, business sagacity has dominated oil.

It was the spur of business competition that developed the pipe line, at first facing hostility and actual violence from the army of teamsters, and then the railroads, in moving petroleum and petroleum products.

Lamp oil or illuminating oil was the product mostly refined. With invention of the automobile, airplane, diesel engine, and switching from coal to fuel oil for locomotives and ships, gasoline and fuel oil became more important, with the sludge being used for roads and asphalt shingles. Much smoke is eliminated, and greater power and efficiency is maintained over the use of coal. A war vessel could be detected by its smoke trail. More than 25,000,000 barrels of oil per year must now be set aside for naval purposes in the United States.

As increased usage of oil continues, many hundreds of companies world wide are exploring. With each new find, the same story prevails, with over production, boom, and bust, along with fires and spills, and then orderly control, when the pipe lines are laid. Each country and each state then follows with taxes, laws, and regulations, with some countries going to nationalization.

p. 4. Oilmen at Electra. (picture). The picture was taken after a visit to the new field at Electra, Texas. R. L. Taylor and M. W. Rahan, at left, W. A. Forster, of Oil City, Pennsylvania and Arkansas, next. Jack Murphy, from Pittsburgh, Pennsylvania, looking over head of "Bull" Heydrick, and John Dwyer, of Oil City, Pennsylvania, is peeping around S. E. Bell's head. Dwyer came to Kansas several years ago, and followed up the leasing business, wherever the excitement

S.E. Bell hails from Smethport, Pennsylvania. After knocking around Illinois for a time, he went to Nowata, Oklahoma, and tried to get a fortune in the shallow field there. Meeting with indifferent success, he went to Texas, and has some good looking propositions there. Next to Dwyer stands R. O. Murphy, brother of Jack, and the two are hustling in the Texas field. Bradford, Pennsylvania people will recognize the shining head of Fred J. Ossenbeck, always the most cheerful man in the country. He is of the firm of Ardizzone & Ossenbeck, and has been busy laying pipe lines in Oklahoma for several years. W.G. Skelly hails from the Ohio and West Virginia fields. He was on his way to Tampico, and stopped off at Wichita Falls to view the country. He is now willing to sell his ticket to Tampico at \$9.99, marked down from \$10.00. E. N. Neff, from Pennsylvania and Lima, Ohio, stands next to Skelly. Neff is a contractor and producer in the veteran class. Turner Overman, an oil producer of Tulsa, and interested in Texas, looms up high in the rear row, and behind him is Lewis Gray peeping over Ted Smith's shoulders. Gray is from the Ohio and Illinois fields. Ted Smith, born in Oil City, Pennsylvania, and living in Pittsburgh or any other oil town, now represents the Frick-Reid Supply Company. The next three in their shirtwaists are J. V. McMahon, F. M. Wilbur, and R. R. Foraker. McMahon was formerly with the right-of-way department of the Standard Oil Company, but now of the firm of Wallace & McMahon, lease brokers of Tulsa, Oklahoma. Wilbur has followed the business from Lima, Ohio, through the Illinois fields, to the west. B. F. Robbins and C. L. Witherspoon, the latter of Hugo, Oklahoma, end the standing line. Those sitting in the front line, from left, are J. E. Bahan, H. C. Evans, son of Joseph Evans, and following his father's footsteps in the business. W. Moran, son of Martin Moran, of The Texas Company. Morrison D. Bell, son of S. E. Bell, and A. A. Little, formerly with the Bessemer Gas Engine Company in Pennsylvania, and now living in Independence, Kansas. The group is balanced in the center by F. A. Blanck, of Stillwell, Oklahoma, Miss M. E. Sharpe, of Hugo, Oklahoma, and George B. Harmon. Harmon began life as a charcoal burner in Potter County, Pennsylvania, and broke into the oil business at Bradford, and has made the rounds of every producing state in the country, besides trying his hand at gold mining in Alaska. Harmon will not admit that he ever tubed a well with the working barrel bottom side up, but he did, and if anyone is curious, we could tell him where the well was located. He is well known as a contractor and producer.

p. 4. Fuller's Earth. Bulletins 365 and 475 of the United States Geological Survey, treat diffusion of crude oil through fuller's earth. One object was to learn why there are variations among the oils of this country.

p. 12. Trade Notes. The Banker's Oil and Gas company, of McAlester, Oklahoma, will begin operations about October 1, 1911, on a well 18 miles from the town. The company contemplates piping oil to McAlester, and will contract the drilling of its wells.

p. 18-20. Development at Electra. It will take probably sixty days to make a complete test of the Electra Field. The principal headquarters is at Wichita Falls, 26 miles to the southeast, from which people travel by machine. Better train service is now solicited between the two towns, with the Fort Worth and Denver City Railway Company having a stop at Electra. The hotels at Wichita Falls are the best, and the oil men have been treated royally. It is probable that within the next 30 days there will be 30 new wells started in different parts of the country, especially to the northwest, toward Lawton, Oklahoma. The wells in the Electra Pool are holding up.

Some 8 or 9 years ago, a small field was opened up at Petrolia, and other shallow tests were drilled in Wichita and Wilbarger Counties. The inexperience of the owners caused the wells to be abandoned. The Producers Oil Company went there two years ago and leased some 240,000 acres, including the Waggoner Ranch, and drilled a test. The first well was completed on the Bywater Heir's land on September 1, 1910. It was 1,800 feet deep, and started off with an initial production of 200 barrels. It is now making 20 barrels a day. Little was heard of

this strike at that time. The company completed No. 2 shortly afterward, and it is now making 25 barrels a day. The same company later drilled a well on the Waggoner land in Wilbarger County, and it made a 30 barrel pumper for a short time. It has since been abandoned at about 1,000 feet. No. 2 on the Waggoner land was dry at 1,200 feet. No. 3 is now pumping 5 barrels a day at 900 feet. No. 4 was abandoned at 2,300 feet for a dry hole. The company then went to another location and drilled a 1,800-foot test. The well is now making 25 barrels a day. No. 6 made 30 barrels a day, and is now pumping 8 barrels a day. No. 7 is drilling. These wells are all on the west side of the track from Electra. The field proper is directly north of town, but leases are now being taken on town lots.

Going across the track, the Corsicana Petroleum Company drilled in No. 1 on the Putnam-Woodruff land, and got a 250-barrel producer in the 900-foot sand. This was completed in April of this year. The Producers started drilling on the west, with the result that the company has three nice wells on the Stringer land. No. 3 was abandoned in the 1,700-foot pay, but was drilled deeper after the Corsicana people brought in the first big well in the deep sand in the Putnam No. 3, which started off at 1,000 barrels on July 25 in the 1,900-foot sand. Just last week, the Producers No. 3 was drilled to the same pay and is another good well. The company is drilling two other wells on the same lease. The Corsicana Company is drilling on the Putnam. Just north of the lease is the property of McFarlin, Chapman & Hivick. Many shook their heads when the company paid \$10,000 for 180 acres, but it looks more encouraging since the early part of the month, when it drilled a test that is making between 800 and 900 barrels a day, starting off at about 1,500 barrels. It has made locations for two more wells, one to the east and one to the west. One well should be started by the latter part of this week. Across the road to the east, the Electra Oil and Gas Company has just completed a nice well in the 900-foot sand. It is rather a disappointment, however, as the sand is much shallower. In the Chapman & McFarlin well, they drilled some 27 feet into the sand, and were not yet through it. A half mile north and east, the Electra Oil and Gas Company got but 14 feet of the same sand at a little greater depth. In the Gilcrease well, the sand was found at 985 feet, and when 2 feet in, the pay was encountered. At 12 feet in the sand, the well flowed over the derrick, when agitated. It is a nice producer, though probably not as large as the Chapman-McFarlin well. The Producers company has been drilling on the J. M. Powers land, just south of the Gilcrease well, but is now shut down.

Within the next several days, several important tests will be made that will tell an important story for the field. The Producer's test, known as the Beat well some 3-1/2 miles to the northeast, in which Overman & Neff have an interest, is drilling somewhere around the 930-foot mark, and it is understood that they have started underreaming. In the Honaker test, the company is drilling at about 400 feet, being almost due east of the present pool. To the north, Overman & Neff started their well on the Flusche Farm, 3 miles north of production. Bill Mowris, of Tulsa, is about 930 feet deep in his test on the Shower's Ranch, south and west of Harrold, 7 miles from production in a northwesterly direction. Sam Bell, of Smethport, Pennsylvania, A. A. Little and Andrew Benson, of Independence, Kansas, have made a location on the Douglas Land adjoining the townsite on the north. Their rig has been started. It is understood that George Brumbaugh took a lease on a number of city lots, making about 13-1/2 acres, and will drill a test within 30 days. The Ninety-nine Oil Company has taken a lease on 20 acres in the north part of town, and will drill a well within a month. Within the next week or ten days, it is expected that several more locations will be made and active work started.

Last week, the Magnolia Petroleum Company took over the interests of the Corsicana and Clayco Companies, so far as taking care of the running of the oil is concerned. The company has the right-of-way purchased to within a few miles of the field, and has already started work on a pump station to the south and east of the pool. The Clayco company has had a loading rack at Electra for some time, and has been sending out several carloads of the oil each day. The Texas

Company has one 35,000 barrel tank to care for its production, and it is understood that its right-of-way has been purchased and will connect with the line of the company running from the Oklahoma fields to the south, where it has a refinery at Corsicana. The production of the field is now between 2,500 and 3,000 barrels a day. It is also understood that the Magnolia company has bought a farm about 2 miles from the present confines of the field for the purpose of erecting tanks. The Gulf Pipe Line Company has not yet entered the game, but according to reports the Gypsy Oil Company has taken over some 400 acres in the heart of the pool, for which it paid a fancy price. Leases are an expensive luxury close in, and they are selling at \$1 and \$2 an acre miles from production. Lease takers are rather dubious about taking up much acreage on account of the uncertainty of affairs so far.

Illinois and Indiana producers are in the majority in the crowd that is sojourning at Wichita Falls. The Oklahoma producers seem to have a hesitancy in going into the new country. Among those at Wichita Falls now are W. G. Skelly of Robinson, Ill.; W. H. Kirkland, Lawrenceville, Ill.; W. H. Whitehill of West Virginia; Tom Woods, Casey, Ill.; F. S. Wilbur of Robinson, Ill.; A. A. Little, Independence, Kansas.; Dr. W. G. Brown, Coffeyville, Kansas; Frank Kelsey, Okmulgee, Okla.; C. W. Benson, Independence, Kansas; J. V. McMahon, Tulsa, Oklahoma.; Andy Gartland. Oil City, Pa.; Calvin Baine, Oil City, Pa.; S. E. Bell, Smethport, Pa.; R. O. Murphy, St. Mary's, W. Va.; George and Lewis Gray, Tulsa, Okla.; A. W. Thompson, Tulsa, Okla.; E. M. Neff, Lima, Ohio; Billy Wallace, Beaumont, Tex.; J. G. Slick, Muskogee, Okla.; J. A. Hull, Tulsa, Okla.; M. J. Delaney, Tulsa, Okla.; D. F. Connolly, Tulsa, Okla.; W. L. Connelly, Independence, Kans.; W. W. Curtin, Independence, Kans.; A. A. Scott, Lima, Ohio; J. S. Young, Chanute, Kans.; Mr. and Mrs. A. H. Black, Independence, Kans.; J. C. Sivalis, Tulsa, Okla.; Fred B. King, Shreveport, LA.; and Waite Phillips, Bartlesville, Okla.

Mr. Wiley Wyatt, proprietor of the Westland Hotel, is making the stay of the producers pleasant while in town. The rooms are fully equipped, even with electric fans. He has given several banquets for the Commercial Club and oil men. The roads are good, but the culverts over irrigation ditches need improving.

p. 26-27. New Incorporations. Clay Oil Company, has been incorporated, at Tulsa, Oklahoma, with capital stock \$5,000, by J. F. Kirkpatrick, T. O. Cremin, and Conn Linn, all of Tulsa, Oklahoma.

Red River Oil Company, of Waxahachie, Texas, has been chartered, with \$40,000 capital stock, by O. H. and P.A. Chapman, E. F. Cunningham, and W. K. Ward.

The Equitable Oil Company, of Bartlesville, Oklahoma, has been incorporated, with \$25,000 capital stock, by C. A. Conlin, Flora Armstrong, and A. T. Dumenil.

Big pasture Oil and Gas Development Company, of Frederick, Oklahoma, has been chartered with \$180,000 capital stock, by W. K. Menefee, Dallas, Texas; C. A. Swartz and G. V. Harris, both of Frederick.

Bankers Oil and Gas Company, Muskogee, Oklahoma, has been chartered, with \$100,000 capital stock, by J. H. Ross, New Hampton, Mo.; J. C. Campbell, Muskogee; P. E. Wilhelm, Coalgate, Oklahoma, and others.

The Columbia Oil and Gas Company, of Texarkana, Arkansas, was incorporated, with capital stock of \$75,000, by William C. Guss, F. W. O'Brien, W. A. Smith, and others. They will begin to drill for oil and gas as soon as derricks can be placed on the ground.

p. 27. New Legislation Suggested. George Otis Smith, director of the United States Geological Survey, denounced the placer mining law which has been applied to oil locations as a "misfit". He suggested that a new law should be framed: that a leasehold should be issued upon the discovery of oil, and that the royalty to be paid the government should vary to meet the local conditions. The chief advantage of that leasing system over the fee simple system, lies in the fact that it will prevent monopoly.

Vol. 10, No. 12, Aug. 31, 1911, p. 2. The Texas Company Statement. Many inquiries have been made asking why the Texas Company stock on the New York Stock Exchange is declining. The Journal cannot indulge in speculation.

The Texas company was incorporated under the laws of the State of Texas, April 7, 1902, with an authorized stock of \$3,000,000. The charter provided for the corporation's existence for fifty years. The capital stock of the company has been increased from time to time, as follows:

April 7, 1905, to \$6,000,000. October 17, 1906, to \$12,000,000.
October 25, 1909, to \$18,000,000. June 4, 1910, to \$36,000,000.

When the Spindletop Field was discovered, The Texas Company pipe line system was started by the construction of a 6-inch line, 20 miles long, to Port Arthur; to this was added 20 miles to Sour Lake, 10 miles to Saratoga, 50 miles to Humble, and 20 miles to Houston. In the latter part of 1907, the company began the construction of an 8-inch line, 460 miles in length from Humble, Texas, to Tulsa, Oklahoma. During the past year, this line was extended to Bartlesville and into the various producing districts of the Cherokee Nation and the western edge of the Osage development. It also has an 8-inch pipe line from Port Arthur to the Texas state line near Logansport, where it connects with the Louisiana Company. This line is approximately 200 miles in length.

In September 1910, the company had steel tankage with a capacity of 11,485,000 barrels, and earthen tankage of 10,360,000 barrels. The company owns telegraph and telephone lines over 1,000 miles in length, connecting various fields, pumping stations, refineries, docks, etc. It also operates refineries at Tulsa, West Dallas, Port Arthur, and Port Neches, with approximate daily capacity of 30,000 barrels. Oklahoma oil is pumped to Tulsa and Dallas refineries, and excess from there to Port Arthur. At Port Arthur the company has an extensive terminal, located on deep water, connected with the refinery by a pipe line three miles in length. It also has extensive factories for the manufacture of cans, cases, barrels, and other containers. The Port Neches refinery is largely devoted to the manufacture of asphalt and similar products.

The Texas Company owns rolling stock, consisting of tank cars, locomotives, five ocean-going tank steamers, nine ocean-going steel tank barges, 10 wooden barges, and 2 tugs. It maintains terminals at various Gulf Coast ports and Atlantic ports, and has approximately 300 distributing stations in various parts of the south, east, and southeastern United States. The storage plant in Antwerp, Belgium, supplies northern continental Europe, while shipments are made direct from Port Arthur to all foreign countries.

The Louisiana Company. The pipe line business of The Texas Company in Louisiana is handled by a subsidiary corporation, chartered under the title of The Louisiana Company on April 4, 1906, for a period of 99 years. The capital is \$1,000,000. The company owns and operates a 6-inch trunk line from Lake Charles, La., to the Jennings Field, La., a distance of 40 miles; also a 6-inch trunk line from Vivian, La., to Ardis, La.; and an 8-inch trunk line from Ardis to Logansport, at which point it connects with the line to Port Arthur.

p. 3-4. First use of oil well gas. The first time natural gas was put in a boiler was probably on the old Hoover well, below Franklin, Pennsylvania, in 1860. The man who used it was C. M. Hoover. The well was located on the Robert Brandon farm, on the bank of the Allegheny River, about 2 miles below Franklin. A barrel was placed on top of the tubing, and a 1-inch pipe inserted in the barrel to carry the gas away. Coal was \$1 a bushel, brought in by barge, and when water was low, it had to be hauled to the top of the hill, above the well, and carried down by men. A burner was constructed by placing holes in the last section of pipe, with closed end, and lighting it below the boiler. Vance Stewart, one member of the firm, visited the well at night, carrying a lantern, and stumbled over the pipe, breaking it, and causing an explosion. He complained to George H. Bissell, another partner, and the pipe was disconnected. This was the second well drilled and producing oil after the completion of the Drake well. Mr. Hoover told this story with his own lips only a few months ago;

"The day the Drake well was struck my wife and I drove into Titusville on

our way to Franklin from Crawford County. We stopped for dinner at the American House. Everybody was excited and rushing around the streets and down the creek. I inquired what was the trouble, and the proprietor told me that Colonel Drake had struck oil in a well near town, and it was making 40 barrels a day. I knew so little about it, that I inquired what kind of oil it was, and what it was good for. Colonel Drake came into the hotel while we were there, and I heard him say that the well was good for 40 barrels. I think also he said he was to receive 12-1/2 cents a gallon for all he could produce.

As we drove home, I remembered that when a boy riding a tow horse to tow coal from Pittsburgh, I had noticed a dark-colored spongy fluid, having a strong odor, coming out of the west bank of the river on the Robert Brandon Farm, and that it would stick to the horse's legs. It struck me that this was the stuff that Drake had found. I went to old man Vance Stewart, who lived just above Two Mile Run, and got him to get a lease from Robert Brandon for his farm, in the name of Vance Stewart & Co. We leased the whole 300 acres, afterward known as the Hoover Farm, and now the Sheasley. I had lost no time, and the lease was taken about September 1, 1859, and we began work at once. We first dug a hole for the conductor down to a blue soapstone, which we found at three or four feet. This was saturated with oil, and the men working in it were covered with petroleum. Stewart went to Mercer County to get some tools such as were used to drill in coal banks, and I rigged up a spring pole, and put up poles for a derrick. The tools consisted of a long iron bar for bit and stem, and a rope socket. I also got Smith & Dewoodey, who were blacksmiths at Franklin, to make us a center bit and reamer. We carried the bits to the blacksmith shop each night, to have them sharpened, and took them back in the morning, carrying them on our shoulders, and walking along the river bank. Then we got heavier tools from Tarentum, the same kind as were used to drill salt water wells. With these we got down to the first sand and into it, and the well began showing oil, November 24, 1859. We could see it in the water, and it showed on the tools. We got pipe for tubing. I knew nothing about a seed bag, but I got a piece of new bed ticking, and at Mrs. Hoover's suggestion, filled it with flax seed, but I had first intended to use oats. The bag was open at both ends, and I simply tied it about the tubing at the ends. If I remember right, they sent us iron rods, for sucker rods, and we used the tubing that was used in salt wells. We had a little coffeepot engine and boiler, but later we got a large tubular boiler and stationary engine from Pittsburgh. I know we were pumping oil in the early part of December, and the well was making 15 barrels a day. We had an old square wooden tank, built of plank, 12 X 16 feet, and about 8 feet deep. After pumping some time, the seed bag burst and drowned us out, and we started to drill for the second sand. A man came to visit the well from Tarentum, and told us how to put up a derrick, and also showed us the walking beam. The derrick was 35 feet high. We struck the second sand December 24, 1859 - a Christmas gift. This well produced at the rate of 100 barrels a day for four years - aside from breakdowns. About this time, we went to Pittsburgh and got 450 feet of 2-1/2-inch copper tubing, and a brass working barrel, and probably it was then we got the iron rods for sucker rods. We also got our cable at Pittsburgh.

By this time, everybody was talking oil, and leases were being taken up and down the creek and along the river, and there were lots of visitors from all sections of the country. We had sold an interest in the well and lease to George H. Bissell, Austin G. Day, and Jonathan Eveleth, on these terms: They had to buy the Robert Brandon Farm and pay one-third the expenses to date, and have a one-third interest in the well and farm. We had a good well, but the market was a fright. We shipped a load by steamboat to Pittsburgh about 100 barrels - consigned to S. H. Lucas & Co. They could not sell it. It was finally hauled up and put in a cellar, and it was a long time before it was got rid of. I do not recall the price. We shipped 1,000 barrels to Schiefflein Brothers & Co., New York. We hauled this to Shaw's Landing, near Meadville, Pennsylvania, and shipped it by canal to Erie, thence to Buffalo and New York. Schiefflein & Co. paid freight, gauging, and storage, and we had to send them \$225 for expenses, besides the oil. In the Fall of 1860, I made a contract with a party to haul oil for us to Franklin,

supposing he would have to haul it over the hill. The price was to be \$3 a barrel. The river froze over, and they hauled it on the ice, and made a good thing out of it. Finally a market was found at Pittsburgh, and we then shipped all our oil there. One day in 1863, a man came to the well and wanted to buy 100 barrels. He was from Tarentum, and had a great many wagons, each drawn by four horses. I sold him 100 barrels at \$15 a barrel, and he paid me cash down in gold. He had men roll the barrels down the hill, and they were drawn up on sleds, two barrels at a time, and loaded into the wagons at the top of the hill.

This first well pumped oil for five or six years, and then ran down so much we tried to clean it out. We lost a bit and then abandoned it, and drilled another well two feet from it. We pumped this 48 hours before we had a show of oil, and then it started at about 25 or 30 barrels. This well got pumped five or six months and quit. We got the sand 445 feet deep, and found oil at 2 feet in it. The site of this well is now covered by the railroad track."

p. 6, 8. Trade Notes. The Magnolia Petroleum Company has let contracts with the J. W. Slaughter Construction Company, for the erection of four brick and concrete buildings at Dallas, Texas, on its property on Carolina Street, along the Katy railroad. There will be three two-story buildings to be used as office, warehouse, and stable, and one building of one story to be used as a cooperage shop. Also eight steel tanks, 24 X 10 feet, will be erected on the property.

p. 8. Personal Mention. Mr. and Mrs. Earl W. Sinclair have returned to Independence, Kansas, after a vacation in the north. Earl is vice-president of the First National Bank at Independence, and extensively interested in oil and gas properties.

p. 10. Magnolia Company's plans. The Magnolia Petroleum Company is going into the open markets with its products, and will be a factor in the oil business from now on. When the plant at Beaumont, under the name of the Security Refinery, was declared to be operating in violation of the anti-trust law, and the attorney-general secured the appointment of a receiver, the plant was shut down, and after the suit became dragging for some months, a compromise was effected, and fines were paid into the state treasury. The plant operating under the name of the Navarro Refining Company, at Corsicana, was also affected by the court's orders, and also shut down. The receiver ordered the properties sold to the highest bidder, which was done, John Sealy of Galveston, becoming the purchaser. Mr. Sealy is a wealthy Galvestonian, who was well able to finance such a large proposition. The plants operated on part time under the name of John Sealy & Co., and lately was reorganized under the name of the Magnolia Petroleum Company, with the following trustees and officers: Messrs. John Sealy, R. Waverly Smith, O. C. Edwards, E. R. Brown, and George C. Greer. Officers, John Sealy, president; O. C. Edwards and E. R. Brown, vice-presidents. Courtenay Marshall, secretary and assistant treasurer, and W. C. Proctor, treasurer and assistant secretary.

Both the Corsicana and Beaumont refineries have been operating with oil shipped in by cars, but a pipe line from Caddo has long been contemplated, and it is very likely one will be built, as survey has been made to Corsicana and a right-of-way taken.

p. 10-11. Diesel engines for sea-going vessels. by J. T. Milton. The possibility of employing internal combustion engines for the propulsion of large vessels, has been recently considered by Lloyd's Register, who will try to fit several vessels. They wanted to obtain as much information as possible from 8 or more companies. A visit was paid to Dr. Diesel himself, inventor of the Diesel engine.

p. 16-17. Advertisement with pictures. Sharp & Hughes Company. Sharp & Hughes patent bit eliminates difficulty of drilling with rotary through hard rock. It has been demonstrated in actual practice for more than 20 years that the rotary process is better adapted than any other method to drilling wells in regions where

soft formations predominate, as for instance, in the Texas and Louisiana Gulf Coast Country. The one drawback heretofore met with in the use of the rotary has been the difficulty encountered in drilling through the hard rock, etc., frequently found intermixed with the soft formations. This problem has been solved once and for all by the Sharp & Hughes Patent Rotary Rock Bit. During the last two years it has been put to practical tests in various districts over a territory extending from South Carolina to California, accomplishing results in boring through hard rock, that equal, and, in many instances surpass the performance of cable tools. We quote briefly from testimonial letters received from users. T. P. Lee, superintendent, The Texas Company. "We ran one day with fish-tail bit, using 4 bits, and making 3 feet of hole. We then changed to the S&H Patent Bit and drilled 45 feet per day without changing the bit." F. J. McNellie, superintendent, Higgins Oil & Fuel Co.: "We drilled with S & H Patent Bit through 26 feet of hard rock in 8 hours at Petrolia, Texas, where it generally took us a month and a half to drill the same rock with common fish-tail bits. We drilled through about 75 feet of hard rock with the S & H Patent Bit in 12 hours at Caddo, Louisiana, which with a regular fish-tail bit would have taken us at least 6 days. Frank Cullinan, superintendent, Producers Oil Company: "I believe that the use of the S & H Rock Bit will show a saving in this territory of Petrolia, Texas, of more than \$1,000 for each well drilled.

It makes a straight round hole. Keeps liberal clearances. Straightens bends, insuring that the string of pipe will go to the bottom of the hole. Requires fewer strings of casing. Makes it possible to carry large diameter rotary holes to greater depth than by any other method. Reduces vibration in drill stem, thus eliminating fishing jobs and loss of holes from breaking of pipe. Requires minimum amount of power for operation, thereby eliminating twist-offs. Will drill at least one foot per hour, any size hole, in ordinary hard rock formations. The cutting edges of the S & H Bit roll in a true circle, do not slip or drag, but crush the bottom of the hole into fine grains, which are washed to the surface in the circulating water, as the bit eats a hole through the rock.

We have in stock and ready for shipment, sizes from 2-3/8 to 15 inches in diameter. All bits are made to run freely in standard line pipe and casing. Recently we have enlarged and improved our plant, greatly increasing its capacity, and we are ready to supply all requirements for the S & H Patent Bits, promptly and satisfactorily. Any driller can use it. Works: Spring and Weber Streets. Office: 510 Texas Company Building, Houston, Texas.

p. 30. A new rockdrill. What is regarded as the greatest advance yet made toward the perfection of the rotary system of drilling wells has been accomplished by the invention of a practical and highly efficient mechanical bit, which successfully overcomes the one weak spot in the rotary process through hard rock formations. It is the Sharp & Hughes Patent Rotary Rock Bit. During the past year, the new bit has been put to the test in various districts from South Carolina to California. Its performance has equalled or surpassed that of the cable tool. The necessity to devise a method to drill through loose sands and other soft formations led to the adoption of the use of rotary drilling for water wells in the Gulf Coast region of Louisiana 22 years ago, in 1889. Nearly 10,000 wells have been drilled in Texas and Louisiana Gulf Coast by this method, both oil and water wells. The one drawback was the slow progress in hard rock. The bit in general use was the fish tail, having two cutting edges, but it was good for only a few inches per day in hard rock.

The Sharp & Hughes Patent Bit was invented to remedy this drawback. It consists of two or more detachable cone-shaped, hardened steel cutters, running on bronze bearings, and lubricated with oil supplied by means of a small pipe carried inside the drill stem. The cutters may be removed and sharpened. This bit has 60 or 70 cuttings edges instead of two. The rotary has replaced cable tools in many places in the past 10 years.

Howard R. Hughes, of Houston, Texas, is inventor and patentee of the bit, and with W. B. Sharp, developed the bit in its present state of perfection. The partnership firm of Sharp & Hughes owns all rights and are the sole manufacturers.

Both gentlemen gained their knowledge of the well drilling business first hand, Mr. Sharp having been one of the first contractors to use the rotary. Eight years before Captain Lucas completed the first gusher on Spindletop, Mr. Sharp drilled a test on this famous hill, failing to get oil because his rig was not heavy enough to go the necessary depth. He was one of the first to operate on Spindletop after that pool was opened in 1901, and since then has had managing supervision of more drilling in Texas and Louisiana than any one individual in the business. Mr. Hughes entered the oil game at Beaumont, three days after the Lucas well broke loose, and he has since been associated with The Texas Company and Producer Oil Company interests. Three years ago, he took up the work of devising a rotary bit that would cope successfully with hard rock. Sharp & Hughes recently enlarged their manufacturing facilities at the bit works, Spring and Weber Streets, Houston, and are now prepared to supply all requirements of the trade promptly and satisfactorily. Inquiries should be addressed to them at their office, 510 Texas Company Building, Houston, Texas, U.S.A.

p. 30. Incorporations. The Eureka Oil and Gas Company, of Houma, Louisiana, has been incorporated, for \$35,000. Officers: Albert M. Dupont, president; A. S. Nicaud, vice-president; and Joseph A. Robichaux, secretary and treasurer.

Vol. 10, No. 13, Sept. 7, 1911, p. 4. Trade Notes. Miss Hermania Kaessman, formerly of Rochester, New York, the school teacher who formed a \$175,000 company at a Rochester tea party to buy and operate a Kansas oil refinery, is bankrupt. Miss Kaessman, the first woman in the world to operate an oil company, organized the Sunflower Oil and Refining Company at Rochester four years ago, and a refinery was built at Niotaze, Kansas.

p. 4-6. Personal Mention. C. J. Wrightsman, formerly an attorney at Tulsa, Oklahoma, now devoting his time to the oil business, has returned from a trip to California, satisfied to settle down and take his chances in the Oklahoma fields.

T. B. Slick was a St. Louis visitor this week, on his way from Oklahoma to Bridgeport, Illinois. Mr. Slick hails from Clarion, Pennsylvania, and has been looking after Oklahoma leases in connection with Shaffer & Smathers. Under the firm name of Slick & Jones, he is interested in a large block of leases south of the Pawnee Field, and is preparing to drill a rank wildcat 12 miles south of Jennings.

p. 6. Recent Deaths. James H. King, aged 71 years, died at his home in Fairhaven, Connecticut, August 29, 1911. Mr. King recently returned from France, where he went in the hope of improving his health. He retired from active work about twelve months ago, after making a fortune in the oil and mining business. For several years previous to his retirement, he was closely associated with John D. Rockefeller and John D. Archbold. He and his brother, F. P. King, of Titusville, Pennsylvania, were early interested in oil developments, the deceased being a friend of the late Colonel Drake in the old oil times. He is survived by his widow and one daughter, Mrs. Sheldon H. Tolles, of Cleveland, Ohio.

P. 18. Ponca City Producer. The 101 Ranch Oil Company has another producer in the Ponca City Field, on the Running Arrow Land, in Section 17-25N-2E, southeast of the first well drilled in June. At 1,580 feet, they got a good body of sand, and at 10 feet in, the well began spraying oil. It is estimated at 100 barrels a day, though just now they have a fishing job with the tools in the hole. They are drilling at about 1,500 feet, on the Crawford Farm, in the SE 1/4 of Section 7-25N-2E. The formations seem to be very regular, with the exception that in the 1,300-foot sand, where gas was found before, there was salt water in large quantities. The company is also drilling on the NW 1/4 of Section 17-25N-2E; the Washita Foureye, at about 400 feet; and on the Emily Primeau, at 700 feet.

p. 18. North Texas, Electra, Texas. Sept. 5, 1911. The Red River Oil Company has a well producing 200 barrels per day from the 500-foot sand on its

property north of the Clayco and Texas leases. An effort will be made to drill the same well through to the 900-foot and lower sands if necessary. The company moved in a drilling machine right away, and will drill a well immediately beside the one just started, to catch the same sand at about 500 feet. There was 20 feet of good sand at 574 feet, and the well flowed for some time before it was shut in.

Sam E. Bell, A. A. Little, and Andre Benson have started their test on the Douglas land, adjoining the town site of Electra on the west. They have about 15,000 acres in one block, and if it proves good, will make a killing.

The Producers Oil Company has a rig up on the Mariott Land, east of the Electra Oil and Gas Company stuff, but drilling has not started on account of some litigation over the lease.

W. C. McBride, of St. Louis, Mo., has entered the game with a view of winning. He has paid some fancy prices for leases, and they look to be worth while, though it is hard to predict the future of Electra. McBride has made a location on the SW 1/4 of W 1/2 of Section 226-Wagoner Survey, known as the Woodruff Land. Mr. McBride paid \$5,500 for 80 acres several months ago, when it was at least 1-1/2 miles from production. He has also made a location on the Woodward 30 acres, lying in Section 22, for which he paid \$10,000. The well will be drilled in the center of the section, in a 5-acre piece, farthest south in the McBride tract.

It is understood that Chapman, McFarlin and Hivick have the adjoining 80 acres on the south, and will drill a well within a short time.

Another outside location has been made by Whitehill & Burns on the SW 1/4 of the E1/2 of Section 226, just east of McBride.

Beuerbaum & Co., of Dallas, have started a test on the Williams Land, northwest of Iowa Park seven miles, about 4-1/2 miles south of the Red River.

The Beat well, drilling in Section 255, by the Texas Company, is drilling at about 1,200 feet, and according to report, has been dry in all the shallow sands. It is also reported that the well filled with salt water in the 900-foot pay. Overman & Neff have disposed of their interest in the well.

W. S. Mowris is about 1,300 feet at his well southwest of Harrold 1-1/2 miles, in Section 23. He missed all of the shallow sands entirely, and will drill a thorough test of his acreage.

The Clayco well, north of the Chapman & McFarlin lease, reported dry in the 900-foot sand, has had a fishing job.

The Frick-Reid Supply Company storeroom has been completed. Ted Smith had been on the ground for the past two months. The National Supply Company, the Oil Well Supply Company, and the Atlas will also open up stores.

Saturday noon, a part of 50 oil men at Wichita Falls left for the Commercial Club of Fort Worth, Texas, to spend Sunday there. They had a royal good time and traveled in a special train.

Vol. 10, No. 14, September 14, 1911, p. 2. Trade Notes. The Southwestern Gas Company, part of the 101 Ranch Oil Company, has about 9 miles of the gas line laid between the gas field at Ponca City and the town of Tonkawa, where they have a franchise.

The Journal acknowledges receipt of an excellent map of the Electra, Texas, oil field, which is the work of F. A. Innes, of Nowata, Oklahoma. Mr. Innes has always kept his Oklahoma maps strictly up to date, and states that he has had numerous calls for a map of Electra.

Another instance of the motor truck replacing the horse is noted by the fact that the Gulf Refining Company is using trucks in almost all the large cities, an order having been placed recently with the American Locomotive Company. The company now has 16 trucks in operation.

The Department of Commerce and Labor says that benzine, gasoline, and naphtha, now so much in use for automobiles, motor boats, and flying machines, form a considerable item in imports, despite the fact that this country is by far the largest producer of mineral oils. The imports amount to 2-1/4 million gallons in the single month of July, 1911.

T. N. Chenoweth, of Kansas City, has been granted a franchise to establish a fuel oil system in Topeka during the coming winter.

p. 3-4, Personal Mention. H. L. Wood, having disposed of his stock in the Petroleum Publishing Company, is no longer connected with The Oil and Gas Journal.

H. F. Sinclair, of Independence, Kansas, and P. J. White, of Tulsa, Oklahoma, are in New York ostensibly on business connected with their producing properties in Oklahoma. The real reason for their trip is a desire to see how their former partner, Frank Ufer, demeans himself as the manager of Carl Morris, the Oklahoma engineer who went East to prove his ability as "white man's hope". Ufer and his associates took up the fighting game much as they would a wildcat lease.

p. 10-12. Flood of oil if all these prospects come good. One town in Oklahoma is not to be satisfied with having prospects of oil only, and the boosters are going after everything that might turn a dollar. Their town correspondent reports the progress of events as follows:

Davis, Oklahoma, Aug. 31, 1911. "At a mass meeting of citizens, Thursday, a \$2,000 bonus was raised for R. L. Plunkett of Coffeyville, Kansas, to drill an oil well near town. The citizens also gave Plunkett a \$1,000 additional bonus for a 20 ton ice plant. Work on both will begin in ten days. Plunkett paid \$5,000 yesterday for a third interest in a 40-acre zinc lease. Davis merchants and bankers are raising a big bonus for the proposed Davis-Turner Falls Railroad into Mineral Field, eight miles west. The meeting resulted in the pledging of \$50,000 for another railroad. Excitement runs high over the discovery of rosin jack assaying more than 30 per cent of metallic zinc. Many prospectors are arriving daily."

p. 12, 14, 16. History of drilling and deep well record. By Isaiah Bowman, United States Geological Survey. In the dry regions of China, centuries ago, a churn drill was invented for drilling for water, surrounded by a curb of stone or brick which settles as drilling goes deeper in loose soil and quicksand, reducing pressure of the surrounding material. They have made slight improvement in their machinery during the last century. In western China, near Tibet, a recent method of drilling for petroleum, consists of a free-falling drilling tool or wooden rod with an iron cap at each end, serving as a hammer, with a chisel or bit attached to the lower end of the rod. The tools are lifted and dropped by a windlass having an automatic release. A sand bucket is used to remove the cuttings. The cable is made of twisted strands of rattan, attached to the top of the rod. With this method, wells have been drilled to a depth of 3,600 feet. The ancient writings of the Chinese contain occasional references to well-drilling machines.

Europe. The science of deep-well drilling received great impetus through experience gained in drilling the Passey well of Paris, completed in 1857, which was curred to a depth of 1,923 feet. Its diameter was 2-1/3 feet, and it delivered 5,588,000 gallons of water daily to a height of 54 feet. Even more remarkable than this is the mammoth well at La Chapelle, which has a diameter of 5-1/2 feet and extends to a depth of more than 1,000 feet. The drill used in construction of this well weighed 4 tons and was operated by a powerful steam engine that caused it to strike 20 blows a minute. The artesian well at Grenelle, near Paris, completed in 1841, was for many years the deepest well in the world. The history of the 7 years of incessant labor expended in its construction is remarkable, giving the engineers their first exercise in recovering broken parts of the bits and rods. A final depth of 1,798 feet was reached in a large cavity, from which water at 82° rose with great force to the surface, forming a parabolic fountain many feet in height. England and Germany soon followed with deep wells, some of which were great dimensions, giving geologists some idea of underground structures.

United States. Contemporaneous with deep borings in Europe, deep wells were first put down in the United States at Charleston, South Carolina, Louisville, Kentucky, and St. Louis, Missouri. In the Pennsylvania oil fields, wells 2,000 to 4,000 feet deep were drilled, the first deep well in the celebrated Oil Creek region, according to a published account of the early development of the fields, having been drilled by Jonathan Watson in 1866 to a depth of 2,130 feet.

As early as 1849 tubular wells lined with iron pipe or casing were drilled with machinery and tools designed by Jesse N. Bolles and a Mr. Knight. In the

central and western United States, tubular wells were not commonly used until 1875, but along the Atlantic coast they were drilled much earlier. Driven wells had been put down as early as 1861. These consisted of a pointed pipe with small holes in the lower end, driven into the ground with a hammer or sledge, not over 30 feet deep, into soft sediments, mainly for water. A patent was granted on a drive well to a Mr. Green after the Civil War. Auger drilling was common between 1865 and 1885, and is still employed. One of the first augers used was in 1855, by J. J. W. Adams, in Virginia, and this auger is now owned by George D. Loomis of Tiffin, Ohio, from whom many historical facts were obtained. The augers ranged from 2 to 4 inches in diameter, and wooden planks or sewer pipes were used for casing. In 1884, a jet outfit was used by W. C. Wells, in sinking wells in unconsolidated material, by using a jet stream of water at the end of the bit to return the cuttings.

The hydraulic method of drilling was used by Jesse N. Bolles in 1857, whereby water was forced down outside of the tubular drill rods, and the cuttings forced to the surface through the tubular rods or drill pipe attached to the percussion bit, with holes in the side of the pipe at the bottom. Mr. Jesse Button perfected this even better after oil was discovered in Pennsylvania.

The first churn drills consisted of a small tree or spring pole, bent over 15° to 30° from the horizontal, with a rope or cable attached to the drill rod. The drill rods were made by local blacksmiths, consisting of solid wooden rods, 7/8 to 1-1/2 inches in diameter, with a steel box-and-pin joint at the top attached to a rope, and a steel chisel or bit and drill stem 2 to 3 feet long or more attached at the bottom of the rods. Cross handles on a top swivel were used to turn the rods while drilling. A derrick of 3 timbers 20 to 30 feet high extended above the spring pole, with rope attached. Two to four men would bring the spring pole down quickly, and the bit would break the rock, and spring back up. When the hole had to be cleaned, the rods were unscrewed, and a syringe-like sand pump was lowered, about 3 inches in diameter with a hinged bottom opening inward, and the cuttings sucked up by quickly pulling up the rods attached to the inner piston valve. The pump and cuttings were lifted out by rope and pulley attached to the derrick top, and the rods and bit screwed together and inserted again. The hole was about 4 inches in diameter, and they drilled about 2 feet a day, with the men resting every few minutes. This was called "kicking down a well", and went faster with a double crew. This was a poor man's way of getting a water well. Most of these wells were in soft rock, not much over 300 feet deep.

With deeper holes, heavier tools were needed, and horses had to be used, and later engines to supply power to a walking beam in place of a spring pole. The first oil well drilled by steam power was put down opposite Tidioute, Pennsylvania in 1860.

The most important tool was a jar, invented by William Morris long ago. It is two linked pieces of steel having an endwise motion or slack of 6 to 9 inches. It allows a quick, hard, upward blow, which jars the tools loose from cavings, or can be combined with a fishing tool to jar broken rod loose, overcoming mere strength to pull up stuck tools. It is reported that George Smith, of Rouseville, forged the first steel-lined jar in 1866, for H. Leo Nelson, who also in that year adopted the "Pleasantville Rig", discarding the "Grasshopper." The Pleasantville has a walking beam on a Sampson Post, with one end attached to the rods and the other to a band-wheel crank.

Many improvements on pumping rigs, drilling tools, and gas rigs were patented by George Koch, of East Sandy, Pennsylvania. A line to control the engine from the derrick was first used by Samuel Taft, in 1867, in drilling a well near McClintockville. A device to regulate the motion of the engine by means of a rod from the derrick attached to the throttle valve of the engine was first used by Henry Webber, who drilled a 600-foot well near Smoky City in 1863. Webber, also perhaps for the first time, dressed the tools in a forge under the derrick.

Drilling wet holes was uncertain until the pump exhausted the water. More than 5,000 wells were sunk with the crude methods up to 1868, before the water was shut out by inserting a casing usually to the top of the first sand. The use of casing was the greatest improvement ever devised in drilling for oil, and

holes can now be sunk safely and rapidly to a depth of 5,000 feet.

Hydraulic Rotary Method. Although rotary methods of drilling had been used before Spindletop in 1901, that discovery gave impetus to the rotary method. The tubular drill string has water forced down the inside, bringing the cuttings up outside under pressure. In the early days, a casing was sunk closely following the cutting bit. About 1890 it was found that thick mud in the drill water plastered the walls almost as good as casing. The rotary pipe turning from the surface down helped keep the hole open. In unconsolidated material, a casing has to be set. Core drilling can also be used with a rotary rig, with an annular bit or shoe on the end of the drill pipe, allowing a core to come up inside the core barrel. This method is now used all over the world.

List of deep wells drilled. (Collected by R. L. Johnson). A selected list, 30.

Location	Depth in Feet	Diameter in inches	Remarks
Germany, Upper Silesia, East of Ryboick	6,572	36 to 2-1/8	Deepest bore in the world.
Pennsylvania, 3-1/2 miles west of West Elizabeth	5,575	19 to 6-1/4	Deepest well in the U.S. Third deepest well in the world. Deepest well drilled with a cable tool. Cost \$40,000.
Germany, Schladeback, near Leipzig	5,735	14 to 1-1/4	Completed 1893 at 1-1/2 feet per day. Cost \$58,076.
South Africa, springs 2-1/2 miles east of Johannesburg	5,382	12 to 1-3/8	Completed 1905, in 9 months. Diamond drill hole.
South Africa, Doenkdoof, 16 miles east of Randfontein	5,560	7 to 1-3/8	Completed Dec. 1904 in 14 months. Diamond drill hole.
South Africa, Randfontein	5,002		Diamond drill hole.
Pennsylvania, Greene Co., in Aleppo Township	5,232	13 to 6-3/8	Abandoned July 1905.
Australia, Queensland, Bimerah Run	5,042		Flowed 70,000 gallons a day.

The other 22 wells listed were less than 5,000 feet deep, but greater than 4,000 feet deep. None were listed in Texas, Louisiana, Oklahoma, or Arkansas.

p. 27. New Incorporations. The Kaufman County Oil Company, of Terrell, Texas, has been incorporated, with capital stock \$10,000, by J. G. Warren, Frank Martin, and J.B. Zink.

The Eastern Oklahoma Gas Company of Sapulpa has been incorporated, with capital of \$10,000, by H. H. McFann, G. W. McFann, and Virgil Hicks, all of Sapulpa.

p. 27. Advertisement. Pioneer Mapping Co., Heydrick & Vance, Bartlesville, Oklahoma. Up to date allotment Township plats and maps of the Cherokee and Osage Nations, showing latest oil and gas development.

p. 30. Gas Notes. According to a report, the well being drilled 6 miles southwest of Texarkana, Texas, on the G. F. Morse property, struck gas at about 1,000 feet. It is said that the pressure was good and that gas was also found in a well located 5 miles northeast of Texarkana.

The Southwestern General Gas Company has been formed at Fort Smith, Arkansas, for the purpose of developing gas lands in that vicinity. It is capitalized at \$2,000,000, and its officers are: J. Walter Gillette, president; James Brizzolari, secretary; and N. L. Garrison, treasurer. The company contemplates the drilling of a number of wells, and if sufficient output is obtained, will seek franchises in Fort Smith and surrounding towns.

The Temple Gas Company, of Temple, Texas, is getting its plant ready for business, and is expecting the arrival of machinery daily. The company has been inoperative for the past three years, its plant having been blown up by an explosion. The Temple Gas Light Company also expects to be able to supply gas within the next 4 months, the bills of lading for the pipe having already been received. With both companies ready for business, Temple will have two gas plants in operation.

p. 30. Incorporations. The Acme Oil Company, of Tulsa, Oklahoma, has been incorporated for \$10,000, by Fred D. Oiler, James E. Hodgson, and R. M. Leer, all of Tulsa.

p. 30. Patents recently granted. Well strainer; M. E. Layne, Houston, Texas, No. 1,001,655.
Perforator for well casings; Hoyle Jam, Bakersfield, California. No. 1,002,153.
Combined drill and underreamer for wells; Hoyle Jam, Bakersfield, California, No. 1,002,152.

Vol. 10, No. 15, Sept. 21, 1911, p. 2. Trade Notes. The Oil Springs Oil and Gas Company is the name of a new company in Tulsa, Oklahoma. They expect to drill 10 wells near Sulphur, Oklahoma, and Electra, Texas.

The LeFlore Gas Company has a franchise for furnishing gas to the town of Spiro, Oklahoma. The company is incorporated for \$25,000, and has already drilled several good gushers for its needs.

Bondholders of the Central Fuel Oil Company held a meeting at New York, September 14, and approved of rescinding the contract with the Texas Company. The contract provided for the sale of the products of the Central Fuel Oil Company to the Texas Company for 10 years. The courts recently denied an injunction against Central, and The Texas Company took an appeal.

p. 4. Recent deaths. (picture) John Eaton, president of the Oil Well Supply Company, died suddenly September 16, 1911, at Atlantic City, New Jersey. He was born in Esopus, Ulster County, New York, August 20, 1840. At the age of 20 he entered the employ of the firm of Joseph Nason & Co., New York, manufacturers of brass and iron fittings. In 1864, he had made such a favorable impression upon his employers, that they sent him to the oil country to investigate the needs of the new development. In 1867, he had fully grasped the possibilities of which the oil business offered to manufacturers, and engaged in the business in a small way, as he says in his memoirs, "backed only by the credit extended by a well known pipe manufacturer." All his life and energies have been devoted to the development of the business which he established in 1867. Two years subsequently he formed a partnership with E. H. Cole, the business of the firm being largely dealers in pipe, pumping machinery, and oil well supplies. Later this firm became well known as Eaton, Cole & Burnham, engaged in manufacturing oil well supplies. In 1878, their business had extended to a point where the firm had transactions in all the then known oil fields of the world, and a corporation was formed known as the Oil-Well Supply Company, Limited, with supply houses in all parts of the oil country and abroad where oil is produced, piped, or refined. The mammoth proportions of the business, however, were assumed after the present concern was incorporated in 1891, and had emerged from the limited partnership plan. Mr. Eaton was always the leading spirit in the business with which he was connected, and in his business transactions he came into personal contact with a large majority of the men who have made the production and sale of oil such a wonderful

industry. He was always ready to assist in anything that would be of benefit to the industry, and his friends were legion. He is survived by his widow and two daughters, Mrs. Frederick W. Denys, of Baltimore, Maryland, and Mrs. Louis Brown, of Pittsburgh. The funeral services were held at his late residence in Pittsburgh, Monday evening.

p. 12. Ponca City News. The Crawford well has not reached the sand, and the hole is being reamed to get the casing down. Considerable cavings have delayed the work and it has been found necessary to ream. Of the two producers, the first, on the Willie Cry Land, is being rigged up to pump and will probably make a 25 barrel well; and the last well, on the Running Arrow, is spraying from 75 to 100 barrels per day.

p. 12, 14. North Texas. No new wells at Electra. Nothing has occurred in the Electra Field the past week. Twenty-three wells are drilling, and 16 new derricks are up. The production of the field, 3,400 barrels a day, comes from 17 wells, from 1,100 to 1,950 feet deep. (details of each well given). The secrecy manifest in so many of the Texas fields in the past is very much in evidence here.

Petrolia. Six tests are drilling in this field. The production of the field is close to 500 barrels a day, 150 of which is from 4 wells, and the rest from 200 small wells.

p. 14. Caddo Oil Field. The total production of the field is about 32,500 barrels a day, of which 26,250 barrels a day is light oil.

Gasser at Naborton. The Christine Oil Company's second test at Naborton was 15,000,000 cfcpd, with 625 pounds pressure, at 2,600 feet. A franchise has been secured to furnish the town of Mansfield with gas at a maximum rate of 35 cents per thousand, and the company has ordered 14 miles of 4-inch pipe, and will immediately begin work of laying the line.

p. 34-35. <u>Oklahoma wells.</u>		<u>Completions and drilling.</u>	<u>Miscellaneous.</u>
<u>Completions.</u>			
Ponca City, Sec. 18-26-3E,		101 Ranch Oil Co. No. 1	dry
Poteau, Sec. 2-7N-26E,		A.V. Graham No. 1 Fee	dry
<u>Drilling.</u>			
Ponca City, Sec. 8-25N-2E,	101 Ranch Oil Co. No. 7 Brett		drilling
, Sec. 17-25N-2E,	101 Ranch Oil Co. No. 1 Running Arrow		drilling
, Sec. 7-25N-2E,	101 Ranch Oil Co. No. 1 Crawford		drilling
Kildare,	Ladow Gas Co. No. 1		drilling
Alva,	Local Co. No. 1		drilling
Guthrie,	Local Co. No. 1		drilling
Kinta,	Ninety-sixth Meridian Oil Co. No. 1		drilling
Lawton,	Local Co. No. 1		drilling
Oklahoma City,	Local Co. No. 1		drilling
Ryan, Jefferson Co.	Local Co. No. 1		drilling
Woodville, Marshall Co.,	Local Co. No. 1		drilling
Sec. 8-10N-8E, Inola, ?	Beatty & Co. No. 1 (19N-17E?)		drilling
Sec. 8-7N-27E	Ft. Smith Traction Co. No. 1		drilling
Sec. 16-8N-27E	Ft. Smith Traction Co. No. 1		drilling
Sec. 21-7N-26E	Ft. Smith Local Co. No. 1		drilling
Sec. 28-3S-11E, Atoka,	Local Co. No. 1		drilling

Vol. 10, No. 16, Sept. 28, 1911, p. 3. Personal Mention. (p. 3-4). E. B. Carter, of Bartlesville, Oklahoma, called at The Journal office last Monday on his way home to Marietta, Ohio. Mr. Carter has been operating in the Oklahoma fields for a number of years, being one of the partners in the Carter Oil Company.

p. 20. Recent fire losses. Last week a battery of tanks belonging to G. F. Getty, the Minnehoma Oil Co., and the Pawhuska-Cleveland Oil Co. were struck

by lightning, four 1,600 barrel tanks partly full, being destroyed.

p. 20. Ponca City. The 101 Ranch Oil Company has a crooked hole in its test on the Crawford Farm in the SE 1/4 of Sec. 7-25N-2E, and will have to pull casing, which was set 20 feet above the sand, and is 4-7/8-inch pipe.

The well on the Willie Cry has been put on a Star pump, and is pumping about 25 barrels a day, being bothered with gas.

The Running Arrow well is spraying in the neighborhood of 50 barrels.

Two tests are drilling, the Washita Foureye and Emily Primeau in the NW 1/4 of Section 17-25N-2E.

Vol. 10, No. 17, Oct. 5, 1911, p. 1. Advertisement. The Oil and Gas Journal (Oil Investors' Journal). Published weekly at 800-12 Mercantile Building, 715 Locust Street, St. Louis, Mo., by The Petroleum Publishing Co., W. D. O'Neill, General Manager. Single copies 10 cents, One year \$3.00. Entered as second class matter Sept. 1, 1910, at St. Louis, under the Act of March 3, 1879.

p. 2. Trade Notes. (p. 2-3). The West Tulsa Refinery of the Uncle Sam Oil Company has been purchased by the Southwestern Refinery Company, of Bigheart, Oklahoma. The consideration is unknown.

An interesting feature of the 1910 petroleum report by the U.S. Geological Survey is the extent of usage of oil in railroad transportation. The total length of railroad lines in 1910 over which oil was used was 21,075 miles. The companies used 24,526,883 barrels of fuel oil, and the engines traveled 88,318,947 miles.

p. 4. Recent Deaths. Arthur J. Henry, aged 60 years, died at Bradford, Pa., September 30, 1911. Mr. Henry was a son of Col. J. T. Henry, one of the early oil country journalists, and who published The Early and Later History of Petroleum. Mr. Henry was connected with several newspapers, being employed for a long time as foreman in the composing room of The Bradford Record. He is survived by two sons.

p. 6, 8-10, 12, 14, 16, 18-20, 22. Interstate Commerce Commission's probe of pipe lines. (In the Sept. 28 issue, the Journal published the first day's testimony). Mr. Cullinan's testimony, president, The Texas Co. The company was established under the laws of Texas, making pipe lines common carriers, and its business in Oklahoma is governed by similar laws. The Texas Company does not own stock in the Producers Oil Company, but many stockholders in one company hold stock in the other. The main pipe lines are connected to the Glenn Pool in Oklahoma. There is station equipment at West Dallas, delivery equipment at Eleanor for the Santa Fe Railroad, delivery tankage at Corsicana for railroads, and refinery equipment at Port Arthur, with other connecting lines. The company's tariff rate is 37-1/2 cents to Port Arthur, 35 cents to Beaumont, delivery charges 2-1/2 cents, gathering charges 12-1/2 to 20 cents per barrel. From the Caddo Field, the rates are 20 cents to Beaumont, 22 cents to Port Arthur, delivery charge 2-1/2 cents, gathering charges 7-1/2 to 15 cents per barrel. The total maximum would be 60 cents a barrel. They considered the railroad rates and got as much out of it as they could. No provisions were made for delivery, nor for a minimum, nor for rejecting a shipment. The company has 7 to 8 million barrels in storage, with 3 million barrels in Oklahoma tankage, and the lines can carry 20,000 barrels a day. They try to run 365 days a year but never do it. Pipe line costs for the 8-inch line from Oklahoma to Humble averages about \$10,000 a mile, including operating costs, with initial cost of \$6,000,000 for construction. Prorated over a certain many years for the lifetime of the line, the above charges were arrived at to pay for the company's expenses plus a certain amount of profit, and was considered reasonable. Considering the history of pipe lines, the early companies came in and competed against teams hauling oil to Oil Creek, Pennsylvania, where the oil was barged to Pittsburgh. The first line was a short 2-inch line, ending at a point called Shaffer. We had awful riots, and the lines were torn up and destroyed, but conditions became better later. The lifetime of a field

cannot be estimated, even after a year and 15 or 20 wells have been drilled. The Glenn Pool was given 10 years, and the pipe line rates adjusted accordingly. The company needs to own its own ships also, because of foreign competition. Certain foreign markets pay less than some in the United States. The oil is high for a producer and low for a consumer. It is a national crime to sell oil at such a low price. Oil is one of our most valuable resources being distributed at scandalous rates. In Oklahoma, The Prairie Oil and Gas Company sets the price for transportation, and other lines follow. If the government nationalized the oil business, they could not set foreign prices, and 40% of our oil would still be exported, at a cheap rate. If we studied conservation, we should not burn fuel oil; it is too good for that usage. At the present cheap rate of oil, we should be ashamed to look our grand-children in the face. You pay 10 times as much for a bottle of water as you would for the same bottle of oil.

Prairie Oil and Gas Company. Mr. J. E. O'Neil, vice-president and general manager, was next called. The company was incorporated under the laws of Kansas. Their oil lines carry their own oil and no other. Mr. O'Neil is president of the Oklahoma Pipe Line Company, and operates a line to McCurtain, Oklahoma, and on to Ida, Arkansas, to Baton Rouge, La., ending at the refinery of the Standard Company of Louisiana. The Prairie Oil and Gas Company, however, was in no way connected with the Standard of Louisiana. In 1904, in the Indian Territory, no common carrier restrictions were imposed. In 1906, assent to act as a common carrier was required. In 1909, when the common carrier feature was taken out, the regulations were the same as before. The Oklahoma Pipe Line Company made application to build its line on April 29, 1908, without assenting to common carrier regulations. In Kansas, the first line northward from Oklahoma 300 miles followed the railroad, and The Prairie paid a certain price per mile to the railroad. He did not know if the laws of Kansas made pipe lines common carriers. In Oklahoma, the Oklahoma Pipe Line Company was chartered as a common carrier. The oil in that line flows to McCurtain, Oklahoma, and then to DeQueen, Arkansas, southward. The company never published any rates and only moved its own oil. Mr. O'Neil had been working for the company since June 1905. The oil was sold to the Standard of Louisiana, and the company received its checks from Baton Rouge. The prices fall when there is overproduction and rise with underproduction, reacting to world markets and odd demands, but the company does not fix prices. His company built a 35,000-barrel tank every day for two years and has 46,000,000 barrels of stock oil on hand. Competition and common carrier laws do not affect the pricing. The company has 1,200 accounts with producers in Oklahoma, and they pay at the wells. Up to 1905, they moved about 3,000 barrels a day by tank car and pipe line. When the Glenn Pool came in, they moved 200,000 barrels a day. The Standard Oil Co. of Indiana built the refinery at Neodesha, Kansas, and the Prairie Oil Co. built the lines, with the refining company setting the price to the pipe line company. Under Indian Department regulations, the producers were required to drill extra wells, creating overproduction. Overproduction lowers prices.

Other companies were Higgins, Magnolia, and Gulf, with similar remarks.

p. 24-25. Caddo Field, Texas-Louisiana. There were 29 completions in September, with 23,255 barrels per day production, with 3 dry holes, 6 gas wells, and 43 rigs drilling, and 13 rigs being moved and built. One well produced 11,000 barrels a day; the Producers Oil Co. No. 17 Levee Board, in the Monetary District. Some of the largest light oil wells of the world have been found here, from 5,000 to 20,000 barrels a day, but these are irregular, and can fall off rapidly. About one in 12 wells is a large producer. The companies operating in the Caddo Field are Gulf Pipe Line Co., Producers Oil Co., Standard Oil Co., Busch-Everett Co., Pure Oil Co., and Higgins Oil & Fuel Co.

p. 26. Wildcat Wells, Texas. The Nash Oil and Gas Company test, located about 10 miles northwest of Texarkana, in Bowie County, Texas, is down between 1,800 and 1,900 feet. A small showing at about 1,850 feet was reported.

p. 31. Advertisement. The Electric Blue Printing Co., 404-5 First National

Building, Tulsa, Oklahoma, Phone 45. Oil maps of the Oklahoma oil and gas fields. Township plats. A complete and correct set of allotment plats of Osage County.

Vol. 10, No. 18, Oct. 12, 1911, p. 1. Advertisement. The Petroleum Publishing Co., President, P.C. Boyle. Secretary-Treasurer, W. D. O'Neill. General manager, W. D. O'Neill.

p. 1. The pipe line probe. The Interstate Commerce Commission's investigation of pipe line conditions in the Mid-Continent fields, has furnished some interesting reading of little practical value, but the testimony reveals a lack of preparation, and possibly want of knowledge on the part of the investigators. The common carrier idea is a fallacy.

In the 1870s, the New York Pipe Line, owned by officials of the Pennsylvania Railroad, carried oil for shippers from a point near Tidioute to Garland, Pennsylvania. At that time, the entire production of all the fields was not more than 13,000 to 14,000 barrels per day, and the average pipe line was not over 5 miles long. When oil was tendered to the New York Pipe Line, it was necessary for the shipper to find a consignee at the terminus, but on failure of delivery with due diligence, the railroad men owning the line applied their familiar term of demurrage, as a charge on the stored oil. Later on, the name was changed to storage, as the term is now used, and became general as a practice with the wildcat lines of that day.

When the "wildcat" pipe lines were carrying oil for various shippers, it was soon found that there was not always a ready market for the oil, and shippers would allow their oil to accumulate until the line was clogged up, and had to shut down. Storage charges were assessed which soon amounted to practical confiscation, and many instances are reported of oil being sold by the pipe lines, to cover such charges.

With conditions as they are at present, with production in the hundred thousands of barrels a day, and lines extending for hundreds of miles, it is quite apparent that the conditions prevalent in the early 1870's would soon be duplicated, on a more troublesome scale. If a shipper attempts to offer any of the common carrier lines an amount of oil less than that required to fill the line, it is very doubtful whether the companies will find it possible to handle the shipment. The shipper who has a small quantity of oil would therefore really get no relief. It is reasonable that no pipe line will be able to handle small shipments, delivering oil in like quantity and quality, without taking the business at a loss.

The eastern lines which are avowedly common carriers, have never done any of this business. It would appear that there are plenty of independent producers and refiners in the Pennsylvania and Ohio fields who could use the common carrier lines, if found to be profitable and practicable. They have the storage in the field, and usually connections which could handle the product at the terminals. For obvious reasons, no use of the lines is made by those who may; but the western lines which admittedly are common carriers, object strenuously to a common use of their facilities, and say they could not do business except at compensatory rates. It appears that the common carrier proposition would be useless to the shipper unless rates are made unusually low; and the pipe lines then will have difficulty making both ends meet, if compelled to meet ruinous rates.

p. 2. Trade Notes. The Midland Refining Company, at Henryetta, Oklahoma, shipped its first carload of kerosene from the new plant last week. The refinery has a capacity of 200 barrels daily.

Joseph C. Trees, the well-known operator, has purchased the Einhouser Farm of 240 acres in the Three Degree Road District out of Pittsburgh, Pa., for which he paid \$30,000. It is a very choice farm, and Mr. Trees will probably erect a fine residence on it in the near future.

The Standard Oil Company's steel barge which will be used in river transportation on the Mississippi will leave its Alton, Ill. refinery Thursday and will start south towed by the steamer Eagle of Louisville. The barge has a

capacity of 500,000 gallons, and will inaugurate a system of river transportation for refined oils.

The German tanker Standard arrived at Port Arthur on Oct. 6, 1911, towing the barge Hainaut, both with cargoes of crude from Tampico, and consigned to the Magnolia Petroleum Company. The two vessels carried 38,000 barrels jointly. The cargo was not furnished by the Pearson interests but by the Doheny interests in Mexico.

p. 2. Personal Mention. Guy Bogart, of Bradford, Pennsylvania, was in Tulsa, Oklahoma, last week, en route to Houston, Texas, where he will look over business in the southwest.

p. 4. Recent Deaths. Malcolm Lloyd, aged 72 years, died at his home at Devon, Pa., September 27, 1911, of heart failure. Mr. Lloyd was one of the founders of the Atlantic Refining Company, and was vice-president of that company until its purchase by the Standard Oil Company. He was a director of the Girard National Bank and Trust Company of North America, and the Delaware Insurance Company. He is survived by his widow and seven children: Malcolm, Howell, Francis V., Stacy, Mrs. Nathan Heywood, Miss Casper Wister and Miss Esther Lloyd.

p. 8. More Oil Competition. So rapid has been the progress made on the Clyde, at Whiteinch, with the construction of a steamship of 5,000 tons burden, driven by oil fuel, built for the Danish East Asiatic Company, Copenhagen, that it is now expected she will be running demonstration trials on the Clyde before the end of the year. The most serious of the problems involved by the peculiar propelling machinery has been solved. One of the 16-inch cylinders has been in operation with satisfactory results in the workshop for some weeks, and it only remains to make the others on the same model.

The vessel is designed for a speed of 12 knots, and it is believed she will run as far on 100 tons of oil as she would on 300 tons of coal, while the space usually occupied by the bunkers will be filled with cargo. There will be no firemen, funnels, smoke, ashes, or dirt, and the engines can be started in five minutes, as compared with 15 hours required to raise steam with boilers.

The only other vessel of the type in course of construction in the United Kingdom is being built at Middlesborough, for a shipping company, of which Lord Furness is chairman. She is a vessel of 3,000 tons, and will be engaged in the North Atlantic trade. If the experiment is successful, other oil propelled craft will be ordered for the same concern.

It is on the Continent, however, that most of the enterprise of oil engines in ocean-going vessels is centered. Two are in hand for the Hamburg-American line, one of 6,500 tons on the Weser, and another of 5,500 tons on the Elbe. The German Levant Line and the Hamburg-South American Company have also motor vessels on order, while the other day the German-American Petroleum Company placed a contract with a firm in Kiel for two petroleum tank ships with a carrying capacity of 7,900 tons each.

These cargo vessels of moderate size will be followed by passenger motor craft of large dimensions, while the speed of trans-Atlantic travel will be considerably increased.

p. 8. Oil Displaces Coal. The report on coal production in 1910 by E. W. Parker, U.S. Geological Survey, is now being prepared. The present consumption of coal on the Pacific Coast is not large, and the opening of coal mines in Alaska depends upon demand by manufacturers. For railroad and manufacturing purposes, the consumption of oil, particularly in California, largely exceeds that of coal - in fact, for railroad use, oil is practically the only fuel. About 15,000,000 barrels of California oil were consumed by locomotives in 1909, and 18,000,000 in 1910. The total consumption of fuel oil in the United States in 1909 was between 35 and 40 million barrels, and in 1910 was between 40 and 50 million barrels. The consumption of coal in the United States was about 5-1/4 tons per person in 1910, but only 1 ton or less per person on the Pacific Coast. About

11 to 12 million tons of coal was displaced by oil in the Pacific Coast states, in 1910.

p. 8. Field for Oil Engines. There is a large and promising field opening up for the introduction of the marine oil engine, both as an auxiliary and main motive power for the Scottish fishing fleet.

In 1910, the Scottish fleet was comprised of 9,724 vessels of 139,701 tons, valued at more than 26 million dollars; sailing vessels 8,128, steam vessels, 1,393, and motor vessels 156. Of the motor boats, 58 are on the east coast, 81 on the west coast, and 17 in the Orkney and Shetland Districts. Some 10 years ago the steam drifter was introduced, and has been rapidly replacing the sailboats. The marine oil engine is cheaper, and there is much interest by the fishermen. In some cases, the boats with auxiliary engines have doubled the season's catch, and there is an ever-increasing number of motor installations.

The most popular auxiliary motor engine is the Gardner, manufactured by an English firm. The engine uses petroleum both for starting and running. The larger boats have 50 to 75 horsepower engines, and the smaller boats have 30 to 35 horsepower engines, giving speeds of 6 to 9 knots. The smaller boats are being abandoned for larger boats.

p. 10, 12, 14, 16. Interstate Commerce Commission's Probe of Pipe Lines. Examiner Frank Lyon for the commission conducted the hearings.

Mr. A. D. Morton, of Bartlesville, was the first witness. He was a broker and producer for 5 years, producing 150 to 300 barrels a day. He sold directly to pipe lines and did not use the lines as a common carrier. The pipe line companies owned production, the pipe lines, and the refineries, with marketing outlets, and therefore fixed the prices to independent producers.

Mr. E. A. Sterling was next. He was in the marketing business, buying and selling oil, and was a producer in the Gulf Coast region, but not in Oklahoma. He sold oil directly to the consumer, but had trouble using a Texaco line as a common carrier because Mr. Martin Moran had set such a high tariff on the movement of the oil. Mr. Sterling used tank cars for his shipments, which was higher than pipelines, but he had no alternative if pipe line rates were higher. Mr. Sterling favored the common carrier law and a reduction in tariff.

Mr. Joseph Evans, operator of the Devonian Oil Company, had production of 1,300 barrels a day, and sold only to the Prairie Oil and Gas Company, and did not need a common carrier law. However, a common carrier law might give him an opportunity to get a better price from a competitor. If one company fixed a pipe line price in an area, the other pipe line companies would follow suit, but not by prearranged agreement, but to meet equal competition. The line offering the lower price would lose its business. Overproduction and a glut in storage would generally lower the price locally, until greater demand came about.

Mr. M. L. Lockwood was next. He was with Sabine Oil and Marketing Company and had operated and produced oil in Oklahoma for 5 or 6 years, producing about 500 barrels a day. He sold his oil to the pipe lines. He said that the present big corporations fix the price to the producer and to the consumer, and that the government should have a common carrier law, with a low tariff on transportation. In fact, he favored nationalization of all pipe lines by the government.

Mr. F. C. Henderson, of Nowata, Oklahoma, was next. He had been in the oil business in Oklahoma for 8 years, with production at 25,000 barrels a month. It was difficult to transport oil by rail or pipeline because of the high prices for movement. If he shipped by rail when Standard shipped, he could secure a lower price at that time, but had to wait for the right time. He thought that the Mexican market, now flooding the United States without tariff, will probably lower the price, since some wells in Mexico were coming in at 100,000 barrels a day. He had more luck selling to a local refinery, the Cudahy Refining Company in Oklahoma than to a far away market in the Gulf Coast. With a shortage of oil in Pennsylvania and overproduction in Oklahoma, Pennsylvania prices are high and Oklahoma prices low for oil. When trying to sell oil from Oklahoma to Pennsylvania, the railroads and pipe line companies would charge more than the oil was

worth, because they knew the price differential and could fix the difference. Therefore, a common carrier line with low price per barrel is needed.

A. B. Potter, of Hill Oil Company, was next. He had been producing about 350 barrels a day, and had been operating in Oklahoma about 3 years. He sold all of his oil to pipe lines, because the cost of transportation was prohibitive. He tried to find outside markets, and could probably do a good business, if the transportation charges were lowered. He favored a common carrier law. He thought that rail rates and pipe line rates should be the same to any designated point, and that the Commission should pass the same tariffs on both types of companies, not just on the pipe lines.

Mr. E. M. Riese was next. He operated the Quintuple Oil Co., the Paova Oil Co., the Lewis Oil Co., and the Clephane Oil Co., and had been in Oklahoma for 5 years, with production of 3,000 barrels a day. He sold all of his oil to pipe line companies. He favored a common carrier law and regulation of pipe lines. He stated that the rates were fair until the Glenn Pool came in, and then things changed. He favored divorcing the pipe lines from production. He said that the risk of building a pipe line is low, and that most lines make a profit when the producers make a profit, and that the pipe lines outlast tank cars in durability, and that building many pipe lines into a field is profitable. At Hamilton Switch, there was a loss, but the producer lost as well. The producers take a bigger risk and should have more profit than the pipe line companies, but they should all make a profit.

p. 21. Ponca City. Henry Leschen, of St. Louis, head of the Leschen Wire Rope Company, with Fred Heberling, the Oklahoma representative, has entered the producing game in Oklahoma, and will drill two wells at Ponca City. They have taken over 320 acres from the 101 Ranch Oil Company, and will start to drill immediately. The first well will be drilled a mile north and one-fourth mile east of the flowing well on the Running Arrow land, and will be located on the southwest corner of the Jessie Knowles land, in the E-1/2 of SW-1/4 of Section 4-25N-2E. A mile and a half to the south of the flowing well, and a quarter of a mile east, on the Mollie A. Miller land, in Section 20-25N-2E, the second test will be drilled in the NE-1/4 of the E-1/2 of SE-1/4. The same people also have a lease on the adjoining farm, that of George L. Miller in the W-1/2 of Sec. 21.

p. 22. Electra, Texas, (also Altus, Oklahoma). The Republic Iron and Steel Company closed a contract Wednesday to supply pipe for The Texas Company's pipe line from Electra, Texas, to West Dallas. It will be an 8-inch line, and approximately 160 miles long.

The Texas Company drilled in No. 8 on the Stringer in the Electra Field, and is making 1,600 barrels. It is in the old part of the field.

The W. S. Mowris well in Block 23, I.G. Showers Farm, is drilling at 1,650 feet, with no showing. Mowris is also drilling on the Fields Farm in Block 28, but is shut down at 150 feet, waiting for casing. No pay was found in the Matthews well in the 950-foot sand, and is now drilling at 1,000 feet. This is in Block 162. P. A. Chapman started a well in Block 190, southwest of the Producers No. 1 on the W. T. Waggoner land, but is shut down, on account of an injunction suite, at 730 feet.

The Red River Oil and Gas Company is rigging up in the center of the south line of Block 161 for a test. In the SE 1/4 of Block 195, the Producers Oil Company is drilling at 900 feet. Primm Nos. 9 and 10 on the Stringer of the Producers are drilling, and the rig is up for No. 11. The timbers are on the ground for No. 12. The company will drill a number of shallow wells west of the deeper tests on the east line of the Stringer farm. The Corsicana Petroleum Company on the Cross & Brown Tract, has increased the production of No. 1 from 25 to 200 barrels, by drilling deeper, and it is still in the sand. The rig is up for No. 2 on this lease. The material is on the ground for Nos. 3 and 4. The Red River Oil Company has just started No. 6 on a part of the Cross & Brown Tract, and the rigs are up for No. 7, 8, and 9. The material is on the ground for Nos. 10, 11, and 12.

The Corsicana Petroleum Company is drilling at 700 feet in its test on the

Sheldon Tract, Block 221. W. C. McBride is drilling at 850 feet on the same land and block. Clint Wood also has a piece of the same block and is shut down at 1,040 feet. He is waiting for 4-inch casing and will try and finish in the 1,050-foot sand. F. B. Birmingham, of the Ninety-Nine Oil Company, is drilling at 800 feet in the same block and tract. The Palmer Oil Company got a small producer in the same block at 770 feet, but when an attempt was made to drill deeper, the rig caught fire and burned two men.

W. C. McBride has started a well on the southwest corner of the 80 acres in the W-1/2 of Block 226. Whitehill & Wood, in the SW 1/4 of the E 1/2 of Block 226, have a hole full of salt water at 890 feet. Overman & Neff, on the Flusche Land, Block 229, are drilling at about 1,300 feet with nothing but salt water in the upper sand. The Producers on the Beat Farm is drilling at about the same depth with no showing so far. The Honaker Oil Company on the Richard Mead land, has a hole full of salt water at 1,100 feet. Burbaum No. 1 on the Williams place is drilling at 1,350 feet and as yet has had no showing.

The Corsicana Petroleum Company has a rig up on the west line of the Honaker, just southeast of the Honaker well. Burbaum has a rig up on the L. P. Douglas place, northeast of Electra, and will start drilling soon. Bell, Little & Benson are drilling at about 900 feet on the Douglas land, adjoining the townsite of Electra. They had a showing in the 350-foot sand, and expect to get something in the 900-foot sand. The Electra Oil and Gas Company has a rig up on the J. M. Powers place.

John Roy has a rig up 3-1/2 miles south of Oklaunion, 10 miles northwest of Electra. There is also a well drilling at Altus, Oklahoma, on a town lot, at about 1,000 feet. It is reported that the Devonian Oil Company will drill 5 wells between Wichita Falls and Moran.

p. 22. Caddo Field, Louisiana. The Producers Oil Company again furnished the leading item of interest, the No. 8 Harrell, making 12,500 barrels a day. This well is 1,200 feet north of No. 6, the discovery well, which made 1,800 barrels, and is northwest of Harrell No. 7, the biggest well to date in the Caddo Field, variously estimated for a time at 35,000 barrels a day or better. The new well was completed on September 9, and flowed for 10 minutes at 10,000 barrels and then shut off. The casing slipped and the well was worked over. On October 5 the well started off again at 12,500 barrels a day. The company has more oil than The Texas Company can take. The Producers other big well, the Levee Board No. 17 in the same district, is still making 10,000 barrels a day. The Texas Company handled 194,000 barrels from Sept. 12 to Sept. 30, an average of 10,000 barrels a day or better, for the one well.

The production is again way up, with 40,000 barrels a day, of which 35,000 barrels is light oil. This total is the highest for a long time.

p. 27. New Incorporations. The Patria Oil Company, of Tulsa, Oklahoma, has been incorporated for \$8,000, by J. I. Gillespie, A. M. Hammett, Daniel Hunt, L. D. Marr, Jr., and W. F. Tucker, all of Tulsa.

The Pathfinder Oil and Gas Company, of Durant, Oklahoma, has been incorporated for \$50,000, by J. Randall Connell, Durant, J.C. Scott and T. J. Winters, of Stringtown, Oklahoma.

The Peoples Oil, Gas and Coal Company, of Muskogee, Oklahoma, has been incorporated for \$15,000, by W. S. Anderson, James Due Pree, and J. V. Cabell, all of Oklahoma City.

p. 30. More Gas Dividends. H. M. Byllesby & Co. announce that the board of directors of the Oklahoma Gas and Electric Company, Oklahoma, has declared a quarterly dividend of one and three-fourths per cent upon the preferred stock, payable Oct. 16 to stockholders of record Sept. 30. Also the Western States Gas and Electric Co. of Delaware. Also the Fort Smith Light and Traction Co., Fort Smith, Arkansas.

Vol. 10, No. 19, Oct. 19, 1911, p. 1. The Osage Nation. The Osage Indians are the richest people per capita in the world. Originally of Missouri, they moved years ago to Kansas, and 40 years later moved to their present location. There are at present 2,230 in the tribe, 2,229 of whom own 657 acres of land each, one of the tribe taking money instead of the land. The tribe has \$9,000,000 invested in Government bonds, which pay 5 percent annually. In addition to this, they have the royalty from their oil, and also the cattle and other industries for revenue. The tribe owns 1,440,000 acres of land, 680,000 of which is leased to the Indian Territory Illuminating Company, which pays into the Indians' treasury approximately \$65,000 a month. The last quarterly payment amounted to \$98.87 per capita, or \$32.62 per month. Thus it will be readily seen that a man with a wife and 5 children with a monthly income of \$228.34 and 4,599 acres of land, does not need to fear the high cost of living very much.

On June 28, 1906, the government passed a law, giving the Indians a royalty for 25 years on minerals and oils found on their land, and the Indians have still 20 years to enjoy this benefit. Beside the oil and gas, zinc and other minerals have been found in sufficient quantities to justify the belief that there are great ore deposits on their lands, but these minerals as yet are undeveloped.

The Osages are blanket Indians and live in 5 villages. At Pawhuska (meaning Gray Hair, named after a beloved chief with hair of that color), the Agency is established. Here is the office building, the superintendent's home, separate dormitories for the boys and girls, and the school and chapel. In the office buildings are 14 clerks, and outside are 6 field men, most of whom are mixed bloods. It cost the Osage Nation approximately \$600 each year per capita to send a child to school, and the tribe is talking of abolishing it, as in every village a school is maintained on which no taxes are paid, and the tribe feels that it does not want to pay taxes on the Agency school any longer. One girl in the school, 13 years of age, is worth \$250,000.

Although the Osages are blanket Indians, they live in houses costing from \$300 and upward, one of the homes in the Pawhuska village costing \$3,000. When moving from one place to another, they live in tents, but that is on rare occasions, as with no tax to pay, they prefer to live on the reservation. There is no written language of these people. The tone of speech is a harsh guttural, but many of them speak English. Eaves Tall Chief, one of the National Council, told the writer that when he was a boy (he is about 33 years of age now), he never heard any English, but now nearly all the children talked some English, citing the case of his little girl, who although a baby, has picked up several English words.

They are restricted Indians, being under the direct supervision of the government. All bonuses and royalties are paid to the tribe as a whole, and distributed pro rata among all. This has caused some little dissatisfaction, because the man with oil on his land hates to share it equally with the one who has nothing but a rocky soil and who can contribute nothing from his farm. This may lead some day to the abolishment of the present arrangement, and allow the man with the good land to derive the benefit alone, while the man with the poor land will have to skirmish around as best he can.

Hugh Pitzer, the agency superintendent, came from Washington, March 1, 1909, having been formerly on the Fox and Sac reservations. He has proved a good manager, and the Osages were never in as good shape as they are at present. E. W. Jeermark, Mr. Pitzer's chief clerk, is another Washington man, having been in the government service for a long time. Besides being a splendid business man, Mr. Jeermark is deservedly popular in Pawhuska. Jim York, the oil and gas inspector, while comparatively a young man, has been in the oil business for years, getting his start in the Pennsylvania districts. His ability has been proved in his present position, and he makes Superintendent Pitzer an invaluable assistant. His efforts to have all the Indian leases cleaned up have proved fruitful, and is shown by the fact that these leases have the reputation of being better kept than any others in the country.

p. 1. Diesel engine. A manufacturer of an internal combustion engine of

the Diesel type offers this simple explanation of its work. A four cycle engine into which you simply feed air, compress it to 500 pounds per square inch, resulting in a temperature of approximately 1,000 degrees Fahrenheit; a fuel pump spraying small quantities of crude oil into the air chamber (cylinder); a complete burning off of this fuel through the heat generated by the high compression of the air - and you have the best in modern power development.

p. 2. Trade Notes. (p. 2-3). The first tank car shipment of oil from Ponca City, Oklahoma, was made October 12, 1911. It was piped from the property of the 101 Ranch Oil Company, and although the Miller Brothers aggregation is known far and wide, the sign painter worked overtime on the car so as to leave no doubt in the minds of those who happened to see it as to where it came from. It bore an inscription stating that it was the first car of oil ever shipped out of Ponca City, and came from the 101 Ranch Oil Company property.

The Baton Rouge refinery of the Standard Oil Company of Louisiana is being increased 75 percent by the erection of additional tower crude stills of the latest type. The work will keep the present construction force engaged for fully another year. The plant, it is reported, will be the largest in the western country, and as the location is admirable for shipping purposes, the capacity will undoubtedly be increased from time to time, until it will take rank with the largest in the states.

A meeting of the board of directors of the Oklahoma Nat. Gas Co. was held at Tulsa, Oklahoma, last week. President G. T. Braden being on a vacation trip in Europe, J. R. Leonard, of Pittsburgh, Pennsylvania, first vice-president, presided. The following directors were present: J. H. Evans, of Tulsa, vice-president; R. H. Bartlett, of Pittsburgh, secretary and treasurer; D. Hastings, of Tulsa, general manager; Harry Heasley, of Pittsburgh, Dennis Flynn, of Oklahoma City, and I. G. Smith, of Butler, Pennsylvania. Routine business was transacted.

Tom D. Brooks, receiver of the Russellville Gas, Oil and Mining Company, of Russellville, Arkansas, has published notice that he will sell the company's property on October 26, 1911. The company was organized 4 years ago by local capital, and drilled 2 wells, one 1,200 feet deep and the other 2,200 feet deep. The company expended about \$12,000 in the work, and, although there was a small showing of gas in both wells, crooked holes and a lack of funds caused them to be abandoned. The company owns some drilling machinery, derricks and some other equipment, and about 11,000 acres of leases. It is thought that Russellville capital will buy in the property at the sale, reorganize the company, and resume drilling.

The towboat Eagle, with the first barge of oil shipped by river from the Standard Oil Company's refinery at Wood River, Illinois, passed through St. Louis Oct. 7, 1911. The boat was towing a steel barge loaded with about 325,000 gallons of refined oil, to be delivered at Louisville, Ky. The company has a contract to deliver 85,000 barrels of oil at Louisville, and the Eagle Packet Company, of St. Louis, has taken the contract for the towing. From Louisville, the barge will return empty, and load again, with the view of making a trip every ten days until the contract is completed. The company expects to continue shipments of oil by river if the present contract is executed satisfactorily. This is the first shipment of oil the company has made by barge down the river from the Wood River refinery, and the outcome of the experiment will be watched with interest.

p. 4. Personal Mention. (p. 3-4). F. G. Mott, of Hamilton, New York, is visiting Independence, Kansas, and looking over the Vulcan Oil and Gas Company's properties. Mr. Mott was one of the pioneers in the Kansas fields, and got practically the best of the production in the field south of Independence.

Howard R. Hughes, of Houston, Texas, stopped in St. Louis, on his way to Chicago. Mr. Hughes is interested with Walter B. Sharp in the manufacture of their patent rotary rock drill bits, and reports that they are meeting with much encouragement. They are planning the erection of a new plant at Houston, which will be completely equipped for the carrying on of their business.

Patrick C. Boyle of Oil City Pennsylvania, editor and owner of the Oil City

Derrick, visited Tulsa, Oklahoma, this week, to attend a meeting of The Petroleum Publishing Company, of which he is president. At the Tulsa meeting, A. V. Bourque, western representative of The Journal, was added to the directorate of the publishing company.

p. 12. A good man gone West. Col. H. L. Wood was a Bakersfield visitor, to witness the meeting of the Independent Producers Agency last Friday. He will be in California a month looking over the oil fields, and may become a resident of the state. Colonel Wood was the Oil City Derrick representative for 8 years in Kansas, Oklahoma, Texas, and Louisiana, and in April, 1910, became editor and part owner of The Oil and Gas Journal of St. Louis, successor to The Oil Investors' Journal of Beaumont and Houston, Texas. He severed his connection with that publication in June last, and has since then been traveling in Colorado, Wyoming, Montana, and Texas, inspecting oil fields, and future possibilities. When he completes the tour of the California fields, Colonel Wood will have been in every field in the United States, Mexico, and Canada. Colonel Wood is a westerner and a frontiersman, and is fairly eligible to become a Californian by brevet. He chased cattle for five years, before breaking into a printing office in 1870, working on the Cheyenne, Wyoming, Leader in 1874. He graduated into the publicity end of the oil and gas industry after some years of experience on livestock journals at the Chicago, St. Louis, Omaha, and Kansas City stockyards, and can cover oil fields on broncos or burrows, if automobiles are not at hand. After making Tulsa, Oklahoma, his home for a few years, he is now anxious to live in California.

p. 34-35. Oklahoma. Wells completed, and drilling. (p. 33-35).
Completed.

Ponca City.

Sec. 17-25N-2E,	101 Ranch Oil Co. No. 1 Running Arrow . . .	50 barrels
Sec. 7 -25N-2E,	101 Ranch Oil Co. No. 2 Crawford	dry

Rigs and drilling wells.

Ponca City.

Sec. 8 -25N-2E,	101 Ranch Oil Co. No. 7 Brett	drilling
Kildare,	Ladow Gas Co. No. 1	drilling

Miscellaneous.

Sec. 8 - 10N-8E,	Inola? Beatty & Co. No. 1 (19N-17E?)	drilling
Lawton,	Local Co. No. 1	drilling
Woodville,	Marshall Co. No. 1	drilling
Ryan,	Jefferson Co. No. 1	drilling
Alva,	Local Co. No. 1	drilling
Oklahoma City,	Local Co. No. 1	drilling
Guthrie,	Local Co. No. 1	drilling
Kinta,	Nineth-Sixth Meridian Oil Co. No. 1	drilling
Sec. 28-3S-11E,	Atoka Local Co. No. 1	drilling
Sec. 8-7N-27E,	Ft. Smith Traction Co. No. 1	drilling
Sec. 16-8N-27E,	Ft. Smith Traction Co. No. 1	drilling
Sec. 21-7N-26E	Ft. Smith Local Co. No. 1	drilling

Vol. 10, No. 20, Oct. 26, 1911, p. 3. Personal Mention. (p. 2-3). W. G.

Skelly, formerly of Pennsylvania and Illinois, was a St. Louis visitor this week, coming in from Electra. Bill sold out his Illinois interests and went to Electra when the field was first opened. He secured some acreage near the town, and has been busy pulling off town-lot deals. He intends to locate at Wichita Falls until the new pool is defined.

p. 6. Petroleum refining. The Census Director Durand released the 13th Census of the United States, on refining, comparing 1904 with 1909. There were 147 refineries in 1909 and 98 in 1904, with capital investment of \$181,916,000 in 1909 and \$136,281,000 in 1904, and value of products at \$236,998,000 in 1909 and \$175,005,000 in 1904, using 120,775,439 barrels of oil in 1909 and 66,982,862 barrels in 1904.

In Oklahoma in 1909, there were 9 refineries, using 1,078,286 barrels of oil.

p. 14. Wichita Falls, Texas. Jack Murphy, lately returned from Mexico, where he was a captain in Madero's army, has a large acreage near Wichita Falls, and he expects to start work at drilling a test well within the next few weeks. Mr. Murphy has had some thrilling experiences as a soldier of fortune, and now will try his luck at the oil business.

At Moran, Cisco, Wayland, Eastland, Breckenridge, Putnam, Graham, and Newcastle, leasers are busy, generally 100 to 150 miles west of Fort Worth, Texas.

p. 26. Ponca City. A third producer was drilled in the past week by the 101 Ranch Oil Company on the Four Eyes Land in the NW 1/4 of Sec. 17-25N-2E, and it will make at least a 50 barrel a day well. They got the sand at 1,513 feet, and at 25 feet in the sand, the well made several nice flows. Henry leschen, of St. Louis, has a rig up in Section 4-25N-2E. The Gypsy Oil Company will also drill 3 wells in that field. The 101 Ranch Company will drill 2 more wells soon.

p. 31. Gas Notes. Natural gas is becoming the most popular fuel in Arkansas south of Little Rock, and its use is being extended everywhere. The Pittsburgh office has directed the Arkansas Pipe Line Company to pipe Donaldson, Friendship, Baker Hill, Perla, Gifford, Traskwood, Butterfield, Price, Lawrence, and all other main line connections.

Vol. 10, No. 21, Nov. 2, 1911, p. 1. The Grandfield Enterprise notifies its readers that "glad tidings have broken out after long confinement under quarantine, and promises to become epidemic." It tells how the son of the village doctor had won the friendship of an oil man at Electra and learned that the main oil pool rested in the Big Pasture, a private map showing the oil belt to be five miles wide, extending from Electra to the Wichita Mountains. Bill Long and some of his co-workers at Electra sent the clipping to the Journal, and demand that an investigation be started at once. It will evidently go hard with the traitor who divulged this information, if the busy sleuths catch him. News of the chase will be awaited with interest.

p. 1. A special to the St. Louis Globe-Democrat from Austin, Texas, states that the Attorney General's Department will institute an investigation into the affairs of The Texas Company, with a view of obtaining evidence to support a suit against it for violating the anti-trust laws. It is alleged that John D. Rockefeller, Jr., has his offices in the New York headquarters of The Texas Company, which would lead to the presumption that the latter company is controlled by the Standard. It's a safe bet that the Attorney General will be spending the state's money foolishly.

p. 2. Trade Notes. The Corsicana Petroleum Company will erect seventeen 35,000-barrel tanks at Electra, Texas, four having already been completed, with material on the way for 12 more.

The property of the Russellville Gas, Oil and Mineral Company of Russellville, Arkansas, was sold at a receiver's sale October 21, 1911, to E. B. Kramer for \$40,000. The company was organized a few years ago to drill for oil and gas. Pockets of gas were struck, but oil was never found.

The Bellevue Oil and Gas Company has been organized at Bellevue, Texas, with a capital stock of \$25,000. Sidney Webb was elected president; George Scalon, vice-president, and J. S. Campbell, secretary-treasurer. These officers, with R. S. Gowan, Thomas Threadgill, A. H. Douglass, W. L. Davis, W. T. McNeil, and E. I. Webb, form the board of directors. The company has about 25,000 acres of leases near Bellevue, and drilling will begin at once.

The Fort Worth, Texas, Star-Telegram says that due to the steady increase in oil traffic from Electra, Texas, to various refineries, the Fort Worth and Denver Railroad has purchased 100 all-steel tank cars, each with a capacity of 10,000

gallons. They are the first tank cars to be owned by the Denver road, the 107 cars which have been in use for some time at Electra being leased from the Burlington Railroad. Forty-four of the new cars are expected to arrive from Chicago next week, and the rest of the supply will arrive within three weeks.

p. 2-3. Personal mention. Charles Page has landed a steel mill for his town of Sand Springs, near Tulsa, Oklahoma.

H. V. Burton, recently connected with the firm of Huntoon & Burton, of Robinson, Illinois, has moved to Jonesboro, Arkansas, where he intends to engage in the land business.

Hon. John H. Payne, of Oil City, Pennsylvania, passed through St. Louis this week on his way to Oklahoma, and called at The Journal office. Mr. Payne has some nice production in the Oklahoma fields, and has been enjoying a rest for some months.

D. J. Kelley, of the Harlem and Manhattan Oil Companies, had gone to St. Louis, Mo., for a few days' visit. D. J. has recently moved his offices to Tulsa from Bartlesville, to be in the center of activities. E. B. Jeager is associated with him in Tulsa, and Mr. Chambers is the new clerk, recently come out from Mr. Kelley's New York City office. They are in the Daniels Building.

Dr. C. W. Hayes, who resigned as chief geologist of the U.S. Geological Survey, left Washington recently for Tampico, Mexico, where he is to assume his new duties as vice-president and manager of the Mexican oil interests of S. Pearson & Sons, Ltd., of London. Director George Otis Smith, of the geological survey, in recommending the acceptance of his resignation, spoke very highly of the work he had done for the department.

A. P. McBride, of Independence, Montgomery Co., Kansas, was a Tulsa caller this week. For the past few months Mr. McBride has been in very poor health. His company, the Consolidated Oil, Gas and Manufacturing Company, is not doing any active work, until there is a rise in oil prices. The company has several thousand acres of land under lease in Montgomery County, Kansas.

Great preparations are being made for the annual hunting and camping trip of a number of Tulsans, numbering among whom are some of the prominent oil producers. They spend a month at Cove, Arkansas, where they have a camp, and ideal hunting and fishing. Among those who are contemplating going are:

Clint Moore, Bartlesville, Oklahoma.	John A. Steele, Tulsa, Oklahoma.
G. T. Braden, Pittsburg, Pennsylvania.	C. R. Murray, Oklahoma City, OK
Cash M. Cade, Shawnee, Oklahoma.	Douglas Franchot, Tulsa, Oklahoma.
H. P. Anderson, Tulsa, Oklahoma.	Albert Brown, Tulsa, Oklahoma.
P.D.C. Ball, St. Louis, Missouri.	Harry F. Sinclair, Independence, KS
Col. J. W. Zevely, Muskogee, Oklahoma.	R. M. Patterson, Bartlesville, OK.
W. S. Mowris, Tulsa, Oklahoma.	C. E. Strouvelle, Tulsa, Oklahoma.
H. L. Wood, Tulsa, Oklahoma.	Guests who were invited are:
Dr. R. B. Rood, Bartlesville, Okla.	Hal Moore, Bartlesville, Oklahoma.
George S. Davis, Tulsa, Oklahoma.	J. D. Cana, St. Louis, Mo.
Frank I. Louis, Tulsa, Oklahoma.	William Clegg, Jr., St. Louis, Mo.
N.V.V. Franchot, Olean, New York.	Sam B. Cook, Jefferson City, Mo.
H. V. Foster, Bartlesville, Okla.	John M. Allen, Tupelo, Mississippi.
Dr. Ross Grossheart, Tulsa, Okla.	Col. Green Clay, Mexico, Missouri.
J. H. Evans, Tulsa, Oklahoma.	Erastus Wells, St. Louis, MO.
Manuel Hirsch, Tulsa, Oklahoma.	A. C. Murdock, Parkersburg, WV.
J. E. Crosbie, Tulsa, Oklahoma.	Jesse R. Leonard, Pittsburgh, PA.
Victor Martin, Tulsa, Oklahoma.	J. F. Fisher, Beaumont, Texas.
	W. M. Duncan, Tulsa, Oklahoma.
	J. F. Pitt, Tulsa, Oklahoma.

p. 10, 12. North Texas. Oct. 31, 1911. The Corsicana Petroleum Company, in the Electra Field, completed the No. 11 Woodruff & Putnam this morning, the well filling a 250-barrel tank in four hours, and is now making better than 50 barrels per hour or 1,200 barrels a day. This is the best well in the field, and is 1,004 feet deep. It is in the proved part of the field. No. 10 of the same

lease will be bailed in tomorrow.

The Benson Oil Company's test on the Douglass Lease has not been completed. The hole has caved and the 6-inch is 20 feet off bottom. It is expected that the hole will be cleaned and casing set tomorrow. This is an outside test, which has a fine oil and gas showing. The well is one and one-third miles southeast of the known Electra Field, and almost at the northeastern edge of Electra. The Journal reported the name of the company as the Bell-Benson Oil Company, and was in error. The company has 160 acres under lease, on which the present test is being drilled. On October 26, 1911, a sand was struck at 975 feet, which showed considerable gas, and the following day the test was deepened 3 feet, and a showing of oil was had. The well was shut down until tankage could be built, and on Saturday it began to drill itself in, and Sunday made four flows, making considerable oil and a lot of gas. Today the 6-inch casing is being set, and the well drilled in. The strongest gas pressure of the field has been found in this test. Operators have been waiting for this outside test for several months, and business will pick up if this is a good well. No outside wells have been previously completed. Some outside tests have missed the upper sands, and are now drilling for the deep sand found in the Corsicana Petroleum Company's No. 3 at 1,900 feet. It was the missing of the upper sands which caused some of the operators to take a pessimistic view of the field and pronounce it a small pool, but now that a test as far away as the Benson has found oil at a shallow depth, it begins to look as though Electra will prove one of the large light oil fields of the country.

Electra today is the largest producing field in the state of Texas, having 27 producing wells, with a total production of about 8,500 barrels a day, exceeding the Humble Field, at present the largest heavy oil field in the Gulf Coast which has about 6,300 barrels a day. The Electra Field has 4 or 5 distinct sands, and the oil is about 41° gravity. The operators think that the production is being renewed from the same source of supply deeper down.

No test in any direction from Electra has proved dry. Only one test is below the 1,900-foot sand, the Producers Oil Company test being at 2,250 feet in the Rogers No. 1, 2-1/2 miles southwest of the field.

The Corsicana Company is ready to drill in the Allen No. 1, the only 10-inch hole in the field. It is reported to be showing good.

The total production of the field is probably closer to 9,000 barrels a day, but some wells are shut in waiting for tankage. The Producers Oil Company has 3,300 barrels a day from 12 wells; the Corsicana Petroleum Company has 2,500 barrels from 10 wells; and the Red River Oil Company has 2,500 barrels from 6 wells. The Culberson Brothers well came in as a small producer several weeks ago, and is being deepened. G. G. Wood of Humble has a 50-barrel well on the Allen lease, formerly called the Electra Oil and Gas company's well. The wells produce steady.

Counting outside tests, 43 rigs are running in the Electra Field, and 18 more rigs are being set up, some as much as 4 miles away.

The Magnolia Petroleum Company, the refining and marketing end of the Corsicana Petroleum Company, has two 37,500-barrel steel tanks full of oil, and has approximately 60,000 barrels of oil in storage in the field. The company is completing a third tank, and has made locations for 14 additional 37,500-barrel tanks. The company has taken a right-of-way for a line to its Corsicana refinery, and it is likely that a refinery in North Texas will be constructed.

The Texas Company has asked for bids to string and ditch a 6-inch line from Electra to Wichita Falls, a distance of 34 miles. It is understood that a 6-inch line will be laid to Gates, the company's station at Dallas, from Wichita Falls.

The J. M. Guffey Petroleum Company has not started any work, although it controls considerable acreage near the proven field.

Leasers from all over the country are here in great numbers, and are scattered over Shackelford, Young, Eastland, Callahan, Bailey, and Stevens Counties, where immense acreages have been leased.

Electra had a population of 600 but now almost 1,000 transients are here. The bulk of the operators stay at Wichita Falls, but the working men live in Electra. The Fort Worth and Denver Railroad runs several trains each way a day.

The water situation is serious at Electra, with all of the water being hauled by tank cars. There is some typhoid reported. The West Springs Water Company hauls water from springs near the Red River, 8 miles to the north, and will lay a 4-inch line by November 20, 1911. The company is composed of R. M. McFarlin, B. H. Leonard, J. B. Hinkle, and C.E. Menzie.

Five supply stores are now in Electra, the Republic Supply Co., National Supply Co., Oil Well Supply Co., Atlas Supply Co., and Frick-Reid Supply Co.

p. 12. Oklahoma. The well drilled at Sugden, 6 miles south of Waurika, in Jefferson County, Oklahoma, was a failure at 1,640 feet.

An important test is being drilled in the Seminole Nation, Section 35-11N-7E, on the Kennard allotment.

Vol. 10, No. 22, Nov. 9, 1911, p. 1. The German Situation. The German press has recently stated that next year a bill concerning a petroleum monopoly will be presented to the Reichstag. The American Standard Oil Company commands the market of the world, having 8 companies in Germany. The Standard undersells the competitors from the U.S., Russia, Roumania, and Galicia, and distributes oil in 5-gallon tins, excluding a middleman; thus setting prices. German merchants want a state monopoly by the German government, fixing the price that all Germans would pay for oil, and bringing an end to the Rockefeller ring.

p. 2. Trade Notes. (p. 2-3). About December 1, work will begin on a 3,000 foot well at San Angelo, Texas, the money for the work being raised by public subscription.

By a vote of 89 to 1, Spiro, Oklahoma, voted the LeFlore Gas Company a franchise to furnish gas to Spiro for a period of 25 years.

The Standard Gas and Electric Company, of Chicago, Illinois, controlled by H. M. Byllesby & Co., originally incorporated April 28, 1910, has secured an amendment to its charter under the laws of Delaware, increasing its capitalization from \$24,000,000 to \$45,000,000.

The Old Hickory Oil Company, of Tulsa, Oklahoma, has been incorporated, with the following officers: C. B. Irvan, president; E. Kersey, treasurer; J. A. Endicott, secretary; M. A. Reasor, superintendent, and C. P. Chenault, general manager. These officers, with D. C. Kersey, W. S. Fleming, and Dr. H.D. Irvan, were the organizers. The company has large holdings in the Morris, Okla., Field.

Notice has been filed of the entry of the Vivian Oil Company, of Shreveport, Louisiana, into the state of Arkansas. The company proposes to use, not to exceed, \$10,000 of its capital in Arkansas, and names R. C. Powers, of Little Rock, as the state agent. The notice states that the company has assets of \$415,847.31 and liabilities of \$47,836.48. E. K. Smith is vice-president of the company, and C.W. Lemon, secretary.

The Secretary of the Interior has announced the appointment of Waldemar Lindgren as chief geologist of the United States Geological Survey, where he has been connected since 1884. He is a trained mining engineer, having received his degree at the Freiberg School of Mines, and has a worldwide reputation as an authority on the geology of ore deposits. Dr. C. W. Hayes, formerly chief geologist, resigned to accept a position as vice-president and general manager of the S. Pearson & Sons, Ltd., Company of Mexico.

p. 4. Personal Mention. (p. 3-4). T. F. Van Oss, a prominent banker of The Hague, Holland, arrived in Tulsa, Oklahoma, for a few days' visit. Mr. Van Oss has been one of the principal promoters of the Union Petroleum Company of Paris, which has secured some valuable properties in the Oklahoma and Illinois fields. Mr. Van Oss is very well satisfied with conditions in Oklahoma and sees no reason why his oil business should not prosper. His company was in no way interested in a pipe line or refinery movement, and was well content to stick to the producing end of the business alone. Mr. Van Oss is on his way to California, and will be in the country for a short time. He is accompanied by his secretary, T. A. Campbell of New York.

W. W. Bell, of Beaumont, Texas, who has been leasing land for the J. M. Guffey Petroleum Company and the Gulf Refining Company for more than 7 years, has resigned, and will engage in the oil business for himself.

W. A. Savage, the pioneer operator in the Caddo Field, has been ill with stomach congestion. About 7 years ago, he and his brother drilled the first test in the Caddo Field, near what is now known as Oil City.

p. 12. Making an Examination. Austin, Texas, Nov. 6, - Dr. William B. Phillips, director of the Bureau of Economic Geology, has collected information on petroleum and natural gas in Texas, mainly on Clay and Wichita counties, on the Petrolia Field in Clay Co. and the Electra Field in Wichita Co. The gas field in clay Co. supplies gas to Fort Worth, Dallas, Wichita Falls, Henrietta, Byers, Petrolia, Bellevue, Bowie, Sunset, Alvord, Decatur, Bridgeport, Rome, and Irving. About Jan. 1911, Lone Star Gas Company had many pipe lines in operation: 125 miles of 16-inch, 4 miles of 12-inch, 5 miles of 6-inch, 40 miles of 4-inch, 6 miles of 3-inch, 16 miles of 2-inch, or a total of 196 miles.

The Petrolia or Henrietta Field became a regular producer in 1904, producing 657,858 barrels of light oil from 1904 to 1910, and selling for 52 to 55 cents a barrel in 1910. Gas is 1-1/2 cents per thousand to Wichita Falls. The copper ores in Archer, Baylor, Knox, Wilbarger, and other counties may now be smelted cheaply, if the ores would be sent to Wichita Falls. Some of the ores carry nearly 60 percent copper.

p. 14. Wildcats. A report from Trickham, Coleman County, Texas, states that a 200,000 foot gasser has been developed at 951 feet. It is also reported that a line will be laid to San Angelo, Texas, to supply the city with gas.

p. 14-16. North Texas. Two Extensions Made. Wichita Falls, Tex., Nov. 6. - With the completion of two wells, one extending the field 1-1/2 miles southeast and the other one mile west of the proved pool. Electra has taken on another boom and no doubt will break the activity record made about two months ago when operators from all over the country flocked to the field.

The Benson Oil Co. well, which has been drilling in for some time, has finally been completed and the well is pumping at the rate of 100 bbls per day, the gas interfering with the valves. The well is located on Douglas land, over a mile southeast of the Corsicana Petroleum Co.'s production on the Woodruff-Putnam land. It is about 975 feet deep, the pay having been struck at 964 feet, and penetrated 11 feet.

The Red River Oil Co. completed its first test on the Allen, about a mile due west of the Producers Oil Co.'s wells on the Stringer lease. This is the other outside test and looks like one of the good wells of the field. The sand was found at 1,000 feet.

With the Corsicana Petroleum Co.'s Allen No. 1, a 10-inch hole standing full of oil, east of the Red River Oil Co.'s fee land, there is no reason to doubt but that Electra will make a big field. - A.V.B.

P. 21. Advertisement. Carnegie Steel Company. General Offices: Pittsburgh, Pa. Steel Derricks and Drilling Rigs. Photograph shows complete 72-foot steel drilling rig in operation at Ladybrand, Orange Free State, South Africa, by the South African Oil Company. United States Steel Products Co., representatives in 18 cities.

p. 23. May use oil. If the request made by the officials of the Pacific Mail Steamship Company of the western coast is granted by the board of directors, every steamship of the fleet will be transferred into an oil burner, according to A. J. Frey, assistant to general manager Schwerin. The total appropriation asked for amounts to \$2,000,000. From a series of experiments recently concluded on the ships already using oil for fuel, and plying between California and Panama, it has been found that the new fuel has resulted in an immense saving.

p. 23. Electricity or Gas. As natural gas runs out, a special effort has been made lately to find some way of making and using artificial gas to take its place. It is claimed that with a surface combustion process in connection with a porous fireclay burner, commercial artificial gas can be produced and used at an expense of only about one-fourth of its present cost. The invention comes from England.

The first attempt to use gas for lights in this country was in 1820 in Baltimore, and it was given up as a failure. Philadelphia took it up in 1835. Fires from gas lighting have been comparatively infrequent, far fewer than those caused by the overturning of coal oil lamps, or from insufficiently insulated electric wires.

p. 26-27. New Incorporations. The Owl Gas Co., of Shawnee, Okla., has been incorporated for \$2,000, by R. L. Hanes, M. E. Hanes, and J. H. Wahl, all of Shawnee.

Vol. 10, No. 23, Nov. 16, 1911, p. 1. Busy Days in Texas. About 6,000 barrels of illuminating oil is used each month in Texas. Four companies are going after the business. The Pierce-Fordyce Oil Association is reported to have purchased ground for a refinery at Fort Worth. It has representatives at Electra, and will build a tank farm at Wichita Falls, and will secure light oils from the Muskogee Refining Co. whose distributing business was taken over by the Waters-Pierce interests.

The Magnolia Petroleum Co. took over the confiscated Standard properties, represented by the Security Refinery at Beaumont and the Navarro Refinery at Corsicana, and the company has contracts for installation of plants in all towns of any importance.

The Texas Co. and the Gulf Refining Co. are actively engaged in marketing oil throughout Texas.

The operation of the Standard Oil Co. in Texas is taboo, and it is an open question whether they will be able to operate in Texas, after the Supreme Court decision dissolving the Trust is complied with. After December, things could change.

p. 1. Petroleum Experiments. The U. S. Geological Survey has for several years carried on experimental work in cooperation with the Johns Hopkins University, to determine the difference in color, gravity, and other features of crude oils found in the same oil field.

Fifteen years ago, David T. Day found that crude oil cannot ooze through the pores of dry shales without leaving in the pores a part of the heavier oils it contains. He thought that the differences between Pennsylvania oils were due to the density and the dryness of the shales, and that the simpler oils possibly came from more complicated asphaltic oils with sulphur.

The subject is reviewed in Bull. 475, by J. e. Gilpin and O. E. Bransky. Their results shows that unsaturated oils, even though very thin or light, are held back in the shales. Thus, when benzol (unsaturated) mixed with paraffin oil (saturated) is allowed to diffuse upward through fuller's earth, the benzol tends to collect in the lower sections and the paraffin oil in the upper sections. If water is added, it drives out the saturated portion more easily than the unsaturated portion. Sulphur compounds also cling to the clay. The possibility is thus established that the simpler paraffin-base oils may have been derived by diffusion through shales from more complex asphalt-base oils.

p. 2. Trade Notes. The DuPont Powder Co. branch office at Tulsa, Okla., has been ordered to Wilmington, Del. The company has had offices in Tulsa for the past several months.

The Jackson County (Ark.) Good Roads Association will try to oil 60 yards of a public road, using 6,000 gallons of oil, to be applied alternately with sand five times, until the coating is about 3 inches thick. If successful, road oil will be used throughout the country. The oil costs 4 cents a gallon.

p. 2-4. Personal Mention. Waite Phillips and associates, of Bartlesville, Okla., spent several days at Electra last week, with a view of taking a hand in the game.

Alfred M. Landon, son of J. M. Landon, of Independence, Kansas, has resigned his position with the First National Bank of that city, and expects to leave in a short time to look over prospects along the Pacific coast, with a view of locating in that country.

p. 10. Texas. Some Wildcats. Dr. Miller and associates, of Los Angeles, have located a well in the south central part of Archer County, near Archer City, and are rigging up. McReynolds and associates are drilling in the old hole at Chillicothe, at the intersection of Wilbarger and Hardeman Counties. A derrick is up on the Webb Ranch near Fulda, Baylor Co., and will be started this week. Several other tests will be started about 15 miles south and west of Electra. At Moran, Shackelford Co., 100 miles a little west of south, the Texas Company has 3 gas wells. A great deal of leasing has been done in Young Co., where there were several shallow wells with gas, and where the Producers Oil Co. may drill 3 wells. In Coleman Co., at Trickham, 100 miles south of Electra, a small gasser was struck at 951 feet.

p. 24, 26. Will Vote on Franchise. The citizens of Ponca City, Okla., will vote on the proposition of granting a natural gas franchise to E. W. Marland on November 16. The grant is to be good for 21 years. Mr. Marland will pay for the election. The consumers will be charged 20 cents per thousand cubic feet, with 2 cents discount if bills are paid on or before the 10th of the month.

Vol. 10, No. 24, Nov. 23, 1911, p. 1. New Refinery for Texas. The Gulf Refining Co. announces that it has purchased a site at Fort Worth, Texas, and will begin construction of a refinery for North Texas.

p. 2. Trade Notes. Electra, Texas, looks more and more like a genuine field every day. Twenty-two arrests the past week for drunkenness, street fights, and assaults with attempts to kill, next to the finding of the oil itself, is the most favorable indication. If it is a real live oil field, a few killings are in line.

The Magnolia Petroleum Company is establishing two distributing stations at Fort Worth, Texas.

The Wichita Falls Oil and Gas Co. has been organized at Wichita Falls, Texas, with a capital stock of \$15,000. The following officers and directors were elected: F. P. St. Clair, J. A. Kemp, and Louis Solinsky, vice presidents; J. D. Avis, President; and W. F. Weeks, secretary. The company has about 3,300 acres under lease about 8 miles southeast of Wichita Falls, including about 1,000 acres of the Avis Ranch. They will begin drilling immediately.

John Elwood, of Newburg, N.Y., claims to be able to produce butter from common coal oil, which defies detection from the real butter, and which will sell for 4 cents a pound. Application for patents has been made.

p. 16. Some Wildcats. The Comanche Oil and Gas Co., supposed to be the Benedum-Trees Oil Co. of Pittsburgh, has been formed at Lawton, Okla., with a capital of \$250,000, and a test will be started as soon as material can be placed on the ground. Eight thousand acres have been leased. The test will be drilled with a rotary, and a deep test made if necessary.

At Sugden, Okla., the Ryan Development Co. is drilling. C. E. Goss is building a derrick for a test on the Bowman Land, six miles east of Davidson. The Big Pasture Oil and Development Co. is getting ready to drill at Loveland, Okla.

p. 26. Have Promising Gas Company. The Arkansas Valley Fuel Co. is issuing bonds for a gas distributing business in Arkansas towns, and has secured franchises at Spiro, Okla., and Sallisaw, Okla. The company was organized by H. V. Foster, Dr. R. D. Rood, J. E. Meloy, and W. R. Golden, all of Bartlesville, the three first named being former residents of Wisconsin, who came to Oklahoma in the early days and made good from the start.

The development work was done by the LeFlore Gas Co., and two wells have been completed, one in sec. 12-9N-24E, and the other in sec. 6-10N-25E. The wells are about 1,700 feet deep, and have a pressure of 350 to 400 pounds, with an estimated volume of 3,000,000 cftgd. Three wells are now drilling, and the company has approximately 30,000 acres under lease. The completed wells are about 17 miles from Ft. Smith. The Choctaw Pipe Line Co., another subsidiary, is building the line to Spiro, and will build to Sallisaw when arrangements are completed.

p. 26. Creek Refinery Sale. The Creek Refinery, at Okmulgee, Okla., was sold by the receiver. Two bids were received Monday and will be submitted to the court. R. F. McFarlin and the Sheets Bros. bid \$5,000, conditional on the property being free from liens and incumbrances. E. E. Shock bid \$600, subject to all such claims. It is estimated that the liens and incumbrances amount to \$9,000, and there are additional judgments. The plant represents an investment of \$43,000 and it is possible that a plan of reorganization may be devised by stockholders.

p. 34. Wells Completed. Miscellaneous. Oklahoma. (all drilling).
 Alva; Local company #1.
 Eldorado; Dickerson & Co. #1.
 Guthrie; Local company #1.
 Kinta; Ninety-Sixth Meridian Oil Co., #1.
 Lawton; Local company #1.
 Oklahoma City; Local Company #1.
 Ryan; Jefferson County #1.
 Woodville; Velvet Oil Co. #1.
 Sec. 28, -3S-11E-Atoka Co.; Local company #1.
 Sec. 31, -7N-26E; Fort Smith Local company #1.
 Sec. 8, -7N-27E, Ft. Smith Traction Co. #1.
 Sec. 16, -8N-27E, Ft. Smith Traction Co. #1.
 Sec. 8, -10N-8E, Inola; Beatty & Co. #1. (19N-17E ?)
 Sec. 25, -11N-7E, Kennard; Price Oil & Gas Co. #1.

Vol. 10, No. 25, Nov. 30, 1911, p. 2. Trade Notes. Announcement has been made of the consolidation of the General Pipe Line Co., the Fort Smith and Little Rock Gas and Oil Co., and the Arkansas Territorial Oil and Gas Co., whose combined capital will reach approximately \$2,000,000, with the General Southwestern Gas Co. of Fort Smith, Ark., which has a paid up capital of \$5,000,000. The companies are controlled by H. M. Byllesby people of Chicago. The General Southwestern Gas Co. filed a mortgage at Fort Smith last week of \$5,000,000, which will be used in prospecting for oil and gas in Oklahoma and Arkansas.

p. 4. Personal Mention. R. N. McFarlin, heavily interested in the Red River Oil Co. at Electra, Texas, was a Tulsa visitor last week, leaving that city for Holdenville, where he makes his home. Mr. McFarlin has just completed a \$20,000 residence at Holdenville. The Red River Oil Co. has a production of nearly 4,000 barrels in the Electra Field.

Patrick Hurley, a prominent young attorney of Tulsa, Okla., has notified his Tulsa friends that Secretary of the Interior Fisher has approved his contract to act as attorney for the Choctaw Indians, and would recommend its approval by President Taft. The contract provides, in addition to an annual salary of \$5,000, an expense account of \$6 per day while in Washington on business for the Indians.

p. 8. Recent Deaths. Edmond Bennett, aged 68 years, dropped dead at Neodesha, Kansas, Nov. 22, from apoplexy. He had been in excellent health up to the time of his death, and was walking down the street when he reeled and fell. The deceased was a pioneer oil man, having started to work on wells along Oil Creek in 1865. He later went to Petrolia, Parker's Landing, and Millerstown, Butler Co., Pa., and went from there to Bradford. He was successful as a contractor, and later engaged in the producing business. When the excitement broke out in Kansas and Oklahoma, he became interested in production there, and operated in the shallow sand field near Nowata, with good success. Mr. Bennett was a man of large stature, weighing about 250 pounds, and was familiarly known as "Big Ed Bennett". The deceased was born at Arcade, N.Y., May 25, 1843. He is survived by two daughters, Nora and Estella Bennett, of Erie, Pa.; two sisters, Mrs. Margaret E. McCarthy, of Buffalo, N.Y., and Miss Mary H. Bennett, of Bradford, Pa. John Bennett, superintendent for the producing department of the Prairie Oil and Gas Co., of Tulsa, Okla., is a nephew of the deceased.

p. 14. J. S. Cosden, a well-known refiner, and E. A. Sterling, a prominent oil broker, while crossing the Arkansas River in Tulsa this week, were prevented from passing a farmer in a wagon. Mr. Cosden tooted his horn, and all of the horse-drawn vehicles gave him the right-of-way except one. Drawing an old-style pistol of the pepperbox variety, the farmer pointed it at the autoists and demanded that they go slowly and not try to pass him. They didn't.

p. 18-19. Electra, Texas, Nov. 27. - The chain of wells and locations between Electra and Petrolia is attracting considerable attention at the present time. A considerable lull had come over leasing, and there was not much demand or inquiry for acreage in the eastern and central part of Wichita Co. or in northwestern and western Clay Co. The high prices asked for territory east of Electra and extending some little distance east of the Bierbaum well soon slowed up the leasing. The next territory to attract attention was to the south, with large blocks taken as far south as Trickham. Many wells have started between Electra and Petrolia, and the field is covering a wide area.

p. 24. Gas Company Sold. The Ardmore Heat & Light Co., owners of gas and light franchise at Ardmore, Okla., has sold its holdings to P. C. Dings, of Ardmore; W. A. Ledbetter, of Oklahoma City, Okla.; O. J. McClane, of Carthage, Mo.; and H. W. Mueschke, of Sedalia, Mo. The purchasers are also members of the Ardmore Gas Co., which owns the mains from the field to the city limits. Mr. Dings announced that several thousand dollars would be spent in making extensions, and that gas for domestic purposes would take precedence over gas for manufacturing purposes.

Vol. 10, No. 26, Dec. 7, 1911, p. 1. Publisher's Notice. The plant and publication department of the Oil and Gas Journal will be removed from St. Louis, Mo., where it is now issued, back to Tulsa, Okla., where it was founded and originally planted. The next publication of The Oil and Gas Journal will be at Tulsa, Dec. 15, and weekly thereafter.

p. 1. Two Hundred Million Barrels of Oil. More than 200,000,000 barrels of oil, with a value of nearly \$128,000,000 were produced in the United States last year, according to David T. Day, of the U.S.G.S., published in "Mineral Resources of the U.S." for 1910. The United States is now the greatest oil-producing country, producing more than all the rest of the world together. Since 1859, the U.S. has produced more than 2 billion barrels of oil. In 1910, the U.S. produced nearly 64% of the world's oil. Russia was second at 21%. The average price has gone down from more than \$1 a barrel in 1900 to 61 cents in 1910. There are now 148,440 oil wells in operation in the U.S. They average about 4 barrels a day. In Pennsylvania and New York, most wells average about

one-fifth of a barrel a day. The original Drake well, if cleaned, would still be capable of one-third barrel a day. A well close to the Drake, 45 years old, is still being pumped.

The increases in production have been due to the successive development of four great fields farther west. By 1900, western Ohio and Indiana fields were being produced.; then came the Gulf fields of Texas and Louisiana; then the Mid-Continent fields in Kansas, Oklahoma, and Illinois. Then California's production had been increasing so rapidly that it became the dominant feature of 1909 and 1910, outstripping the production of any other state, and promising to retain this supremacy in the future.

More than 8,500,000 acres of land are leased for oil, and 700,000 acres are owned in fee by oil operators.

The use of fuel oils is steadily increasing. Railroads consumed 24,586,108 barrels in 1910. The Navy has switched to oil rather than coal. Battleships Delaware, North Dakota, Colorado, Utah, Wyoming, Arkansas, Texas, and New York have switched to oil. New battleships 36 and 37, authorized by Congress, will burn oil exclusively. It is probable what within a few years, heavy oil engines of the Diesel type will be extensively adopted for marine propulsion, owing to recent improvements in Europe by which 1,000 to 2,000 horsepower can be developed from a single cylinder.

p. 3. Personal Mention. H. M. Gilchrist, of Indianapolis, Ind., spent Thanksgiving with his daughter in St. Louis, and with Mrs. Gilchrist, left for Bartlesville, Friday, where they will make their home during the winter. "Heck" was one of the active operators in the Trenton Rock Fields, and secured some good production when Oklahoma opened up. He has lately been taking a flyer at Electra and will remain in the west in order to be near his properties, as well as to enjoy the ideal Oklahoma climate.

p. 4, 6. Rockefeller Quits as Oil Trust Hand. New York, Dec. 4. - John D. Rockefeller terminated his career as president of the Standard Oil Company of New Jersey today. With him there also retired most of the conspicuous figures of the early days "Oil Trust". No Rockefeller remains among the officers and directors of the Standard Oil Co. of New Jersey, chief of the oil corporations, which was the holding company up to the time of the recent dissolution of the great combine. William Rockefeller, William G. Rockefeller, C. M. Pratt, H. M. Flagler, E. T. Bedford, and others, whose names have been noted in the oil business, have resigned. John D. Archbold, one of the few members of the "Old Guard" to remain, became president of the Standard Oil Co. of New Jersey and will control its destinies. James A. Moffat, who was elected first vice-president of the reorganized New Jersey Co., is one of the best known of the new men in the Standard Oil Co. He was with the Standard Oil Co. of Indiana when Judge Landis imposed his \$29,000,000 fine upon that company. W. C. Teagle, elected second vice-president, is a man under 40, but long ago acquired a reputation for marked ability in the oil trade. From an unofficial source it was learned that the Standard Oil Co. of New York has no intention to change its present capitalization of \$100,000,000.

On the 15th floor of the Standard Oil Building, from an early hour Friday morning, stockholders of the company, their representatives and messengers, formed a long line in the corridor in front of the transfer office, in Room No. 1501, waiting to receive their certificates of stock in the 35 companies into which the great corporation has been dissolved. The stockholders had the option of receiving their shares by mail or by express, but nevertheless employees in the transfer office were overwhelmed by personal applications.

Officials stated that all the companies were earning their separate dividends now, beginning Dec. 1, and that each subsidiary was conducting a separate accounting and a separate payroll. The Standard Oil Co. has anticipated its dissolution by nearly a month, since the last order was issued by the U.S. Circuit Court on June 22, and the time limit for its observance does not expire until December 22. It was said that in all probability the legal representatives of the

corporation would follow the action of their professional brethren in the American Tobacco Co. by retiring to private practice, but continuing to act for the various companies in that capacity.

Notwithstanding the exodus from the building at No. 26 Broadway, the Standard Oil Co. of New Jersey will continue to occupy the entire structure. Net assets of the concerns which remain under the old roof amount to about \$180,500,000 and represent one-half of the earning capacity of the old corporation.

The transfer, office, and date of the annual meeting of each of the 35 companies, including the Standard Oil Co. of New Jersey, into which the trust has been divided, in accordance with the Supreme Court's decree, are as follows:

The Atlantic Refining Co., 3144 Passyunk Ave., Philadelphia; first Tuesday in March.

Borne-Serymser Co., 80 South St., N.Y., N.Y.; last Monday in February.

The Buckeye Pipe Line Co., 26 Broadway, N.Y., N. Y.; fourth Wednesday in May.

Chesebrough Mnfg. Co., Consolidated, 17 State St., N.Y., N.Y.; first Thursday in May.

Colonial Oil Co., 26 Broadway, N.Y.; second Tuesday in January.

Continental Oil Co., McPhee Bldg., Denver; second Thursday in May.

The Crescent Pipe Line Co., 424 6th Ave., Pittsburgh; first Monday in May.

Cumberland Pipe Line Co., 206 Seneca St., Oil City, Pa.; first Thursday in December.

The Eureka Pipe Line Co., 206 Seneca St., Oil City, Pa.; third Thursday in January.

Galena Signal Oil Co., S. Park St., Franklin, Pa.; first Tuesday after first day of January.

Indiana Pipe Line Co., 26 Broadway, N.Y.; third Wednesday in March.

National Transit Co., 206 Seneca St., Oil City, Pa.; first Monday in May.

New York Transit Co., 26 Broadway, N.Y.; Last Tuesday in January.

Northern Pipe Line Co., 26 Broadway, N.Y.; third Thursday in January.

The Ohio Oil Co., Findlay, Ohio; Thursday after 4th Wednesday in May.

The Prairie Oil & Gas Co., Independence, Kans.; second Tuesday in December.

The Solar Refining Co., Lima, Ohio; Wednesday after first Monday in January.

Southern Pipe Line Co., 206 Seneca St., Oil City, Pa.; 3rd Thurs. in Jan.

South Penn Oil Co., 424 6th Ave., Pittsburgh; third Tuesday in January.

South West Penn Pipe Lines, 206 Seneca St., Oil City; 3rd Tues. in January.

Standard Oil Co. (California), 461 Market St., San Francisco; February 20.

Standard Oil Co. (Indiana), 72 W. Adams St., Chicago; 1st Thurs. in March.

Standard Oil Co. (Kansas), Neodesha, Kans.; second Wednesday in May.

Standard Oil Co. (Kentucky), Louisville; first Thursday in February.

Standard Oil Co. (Nebraska), Brandies Bldg., Omaha; 1st Monday in January.

Standard Oil Co. of New York, 26 Broadway; last Thursday in February.

Standard Oil Co. (New Jersey), 26 Broadway; second Tuesday in January.

The Standard Oil Co. (Ohio), 3225 E. 55th St., Cleveland; 1st Mon. in Jan.

Swan & Finch Co., 151 Maiden Lane, N.Y., N.Y.; second Tuesday in January.

Union Tank Line Co., 26 Broadway, N.Y.; third Wednesday in February.

Vacuum Oil Co., Rochester Savings Bank Bldg., N.Y.; 3rd Weds. in Feb.

Washington Oil Co., 424 6th Ave., Pittsburgh; first Wednesday in April.

Waters-Pierce Oil Co., 420 Olive St., St. Louis, Mo.; 3rd Thurs. in Feb.

Anglo-American Oil Co., 36 and 38 Queen Anne's Gate, London; no day.

The Standard Oil Co. will rearrange its offices at 26 Broadway, and will fill the entire building. The Oil Trust theoretically passed out of existence on August 31, but the Standard Oil Company of New Jersey will continue to exist, with its several large plants, but the subsidiary companies will no longer occupy any space in the old building at 26 Broadway. The new Standard Oil Co. of New Jersey will still have assets of \$300,000,000.

p. 8-10. Statistics of Petroleum Production in 1910. By David T. Day, U.S. Geological Survey. Production in barrels. Oklahoma.

1891-30	1901-10,000
1892-80	1902-37,100
1893-40	1903-138,911
1894-130	1904-1,366,748
1895-37	1905-included with Kansas
1896-170	1906-included with Kansas
1897-625	1907-13,524,128
1898-?	1908-45,738,765
1899-?	1909-47,868,218
1900-6,472	1910-52,928,718

p. 12. Electra, Texas. The 4-inch water line of the Electra Water Co. has reached the oil field, and just in time, for a number of rigs were shut down, and others could not keep going much longer. It will be extended to the town, and will certainly be a boon, as Electra has been up against it for good water; a number of deaths occurring from typhoid fever. The town will erect a standpipe and put in a water system which will probably be shortly followed by a sewer system. The water main extends to Spring Creek, about 12 miles northwest of Electra. The Denver Railroad will probably take advantage of the good water and build a tank at Electra.

Vol. 10, No. 27, Dec. 14, 1911, p. 2. Trade Notes. George T. Williamson and W. R. Ritchie, Tulsa real estate dealers, have bought the townsite of Jenks, the center of the newest oil field in the south of Tulsa development. On one side of town is a 500-barrel producer and on the other side is a well making 200 barrels a day. The purchase includes about 600 lots, part of which will be leased for oil and gas. The purchase price according to the deed was \$6,225.

p. 3-4, 6. Personal Mention. William Stephenson, of Batson, Texas, who for a number of years has devoted his time to the search for the existence of petroleum, and who has leased considerable land in Comanche and Tillman Counties, Okla., has gone to Batson to spend the holidays. He has written a number of articles on oil, and has contributed articles to the Journal.

Dr. J. R. Udden, geologist for the Texas Bureau of Economic Geology at Austin, is preparing a report on the Electra Field and Petrolia Field.

E. T. Wilson, president of Continental Oil Company of Denver, will move from his home in New York City to Denver, to take charge of the company. The company operates in Colorado, Wyoming, Idaho, Montana, Utah, New Mexico, and in a portion of Manitoba, Canada.

p. 14, 16. North Texas. Electra. The Waggoner lease was the first to be drilled at Electra, about 1901. Electra got its start from a well drilled by the Waggoner Brothers for a deep artesian water well. At a reported depth of 500 feet, an oil sand was passed through, and although the old test is 10 years old, oil may still be bailed from it. The field laid dormant until several years ago when one of the Waggoner Brothers drilled several small wells which are now owned by the Producers Oil Company.

Oklahoma. The deep test drilled by the Altus Water Co. at Altus, Okla., has been abandoned. No oil or gas was found.

At Davidson, Tillman Co., Okla., Campbell and Associates, on fee land, are rigging up for a test 9 miles east of town. The hole will be drilled to 2,500 feet if necessary.

The test at Sugden, Okla., is shut down while the interested parties are trying to raise additional funds. It is reported to be 1,600 feet deep.

p. 24. Kansas City Gas Supply. Prof. D. W. Ohern, director of the Oklahoma Geological Survey, did not believe that the gas supply to Kansas City from Oklahoma and Kansas gas fields will be exhausted in 3 years. He has worked the geology east of the Osage Nation, and the fields show no sign of exhaustion.

p. 26. Gas Notes. Pine Bluff, Ark., is now being supplied with natural gas, it having been turned into the mains about 10 days ago. Where the price of artificial gas was \$2.20 per 1,000 cubic feet, the natural product is selling for 43 cents per thousand.

The Arkansas Natural Gas Co. is laying lines in Sheridan, Ark., and within a short time the inhabitants will be supplied with natural gas from the Louisiana Field.

Vol. 10, No. 28, Dec. 21, 1911, p. 2. Trade Notes. The new smelter of the American Smelting and Refining Co., now being erected at Hayden, Ariz., at a cost of \$1,500,000 will use oil exclusively for fuel. This is a new and permanent extension of the market for crude oil. For more than a year, oil has been used as fuel in the Magill smelter of the Nevada Consolidated Copper Co. at Ely, Nevada, and has given the best of satisfaction. Whenever possible, the large mining and smelting interests have substituted oil for coal.

The Columbia Land, Oil and Gas Co., composed of business men of Hannibal, Mo., has been incorporated under the laws of Arizona, with a capital stock of \$75,000. The officers are: George F. Jasper, President; Dr. William C. Guss, vice-president; George J. Gray, secretary; William A. Smith, treasurer; and Dr. W. F. O'Brien, assistant secretary. The company owns 320 acres of land in Columbia Co., Arkansas, on which is located the town of Experiment. It also has leases on 24,000 acres of land surrounding the town. The offices of the company are in Honback Bldg. at Hannibal, Mo.

p. 6, 8. Texas Petroleum Production. Director William B. Phillips, of the Texas Bureau of Economic Geology and Technology, issued the following:

The Electra Field now produces 10,000 barrels of oil a day, from permocarboniferous beds. Dr. J. A. Udden, using a previous report by Prof. C. H. Gordon, formerly of the U.S. Geological Survey and now at the University of Tennessee, is studying the area. More than 80 well records of Wichita and Clay Cos. will be used, along with previous reports from 1888-1892 and 1901-1905. Dr. Udden's report will be the first report on this area. Total production of oil in Texas from 1889 to 1910 was 147,460,188 barrels, with a peak in 1905 of 28,136,189 barrels. There has been no state report on oil and gas since 1901. No maps have been issued and no statistics gathered since then. The Texas Geological Survey was destroyed in 1892, and the same fate befell the University Mineral Survey in 1905, after 4 years. The Oklahoma Geological Survey gets \$18,800 per year. For 1907-1909, the total mineral products of Oklahoma was \$82,503,857, and of Texas \$52,406,194.

p. 14. Ponca City Field. Four wells are drilling in the Ponca City Field. There are 3 producing wells in this field, with a gross production of 150 barrels a day. All are owned by the 101 Ranch Company, the oil being piped through a 2-inch line to a loading rack on the Santa Fe Railroad at White Eagle, and then shipped by cars to the Oklahoma City Refining Co.

The discovery well was drilled on the Willie Cry Land, in the SW 1/4 of Sec. 8, T. 25 N., R. 2 E., and it is making 70 barrels a day after the shot. No. 1 Running-After-Arrow, in the NE 1/4 Sec. 17, 25N-2E, was then drilled, and is making 40 barrels a day natural. The third producer, No. 1 Washita Four Eyes, in the NW 1/4 Sec. 17, 25N-2E, is also making 40 barrels a day natural. The oil is about 43 gravity and is a very high grade of refining oil.

A number of gas wells of good volume have been drilled, and a 4-inch line has been laid to Tonkawa and is supplying that town with gas.

p. 15. Electra, Texas. Electra is one of the most rapidly growing towns in the country. When oil was found, the population was 636, but now it is almost 2,500. Brick buildings and cement walks are now accepted as the regular thing. The new Denver Hotel, now being constructed by Messrs. Cross and Crow, is a 3-story buff brick building. The Magnolia Petroleum Co. is building a 2-story brick office building, for itself and its production company, the Corsicana Petroleum Co. Also a brick bank building, a large brick garage, and 5 new brick mercantile buildings are under construction, along with many substantial bungalows. A waterline and standpipe are also being built. Much of the credit is due to Mayor Fay D. Woodruff who came to Electra several years ago from Moriah Center, New York.

p. 35. New Incorporations. The Comanche County Oil and Gas Company has been incorporated for \$250,000 in Lawton, Oklahoma.

The Kendall Oil Company, of Vinita, Okla., has been incorporated for \$5,000 by J. H. Kendall, H. J. Swartz, and J. W. Swartz, all of Vinita.

The Globe Drilling Company of Tulsa, Okla., has been incorporated for \$15,000 by B. M. Gessel, Ben O. Conner, and R. S. Sherman, all of Tulsa.

Vol. 10, No. 29, Dec. 28, 1911, p. 1. Advertisement. The Journal for 1912. After Jan. 1, 1912, the Journal will be \$4 a year. When the Journal came into its present ownership about two years ago, it was enlarged, and published weekly. The Petroleum Publishing Co.; President - P. C. Boyle; Editor - Thomas A. Latta; Secretary-Treasurer - W. D. O'Neill. Single copies 10 cents. 110 S. Boulder, Tulsa, Oklahoma.

p. 18. Southwestern Oklahoma. Seven wells are starting on the north side of the Red River. The Comanche County Oil & Gas Co., of Lawton, is a local concern and is capitalized at \$1,000,000, with \$60,000 paid up. They have a rotary derrick up, and it could be a deep test.

A test well at Marlow is down 1,300 feet, but nothing has developed.

The Goodman Brothers of Tulsa have a guarantee in a bank at Chattanooga, that work will soon start on a large acreage near there.

Work has started on a deep test at Loveland, and also on a well at Davidson, and a contract has been let on a well near Devol.

The promoters of a well at Grandfield are securing more leases.

A derrick is up on the Kuntz Farm, five miles east of Lawton. A Mr. Robertson is pushing the work.

At Altus, citizens decided to drill a test to 1,800 feet near there.

In the Chattanooga area, Benedum & Trees are operating under the name of the Steel City Oil & Gas Co., and have secured 14,000 acres.

Vol. 10, No. 30, Jan. 4, 1912, p. 3-4. Trade Notes. A dispatch from Red Oak, Oklahoma, says that a test being made there came in as a 3-million gasser on Christmas day. A Bartlesville company has leased several thousand acres, and four rigs are being erected between that village and Wilburton. Red Oak is in Latimer County.

p. 12. Oklahoma Wildcats. Gas Strike Creates Interest. A gas well brought in the past week near Red Oak, Latimer Co., has caused considerable interest, the well being reported as a 3-million gasser. A St. Louis company drilled the well, and is reported to be drilling a test near Wilburton. There is some talk of piping the gas to McAlester, which will probably be done if the field develops sufficiently to justify the move. The Warren Oil Co. of Bartlesville is reported to have 10,000 acres leased near the new well.